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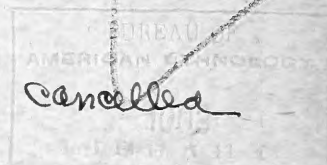
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New York State Museum

FREDERICK J. H. MERRILL, Director

Bulletin 70

MINERALOGY 3



LIST OF

NEW YORK MINERAL LOCALITIES

BY

H. P. WHITLOCK C. E.

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New York State Museum

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Bulletin 70

MINERALOGY 3

LIST OF

NEW YORK MINERAL LOCALITIES

PREFACE

The lack of systematic classification and of accurate geographic and geologic location of the many mineral localities of New York State, which so materially hampers a detailed study of any mineral collection, has suggested the preparation of a list of the recorded localities for mineral specimens in New York State, which is offered to the public in the following bulletin. The kindly reception accorded to the previous publications of this division of the New York State Museum has led to the hope that the present bulletin will meet a material want not only as a curatorial aid to museum workers in mineralogy in furthering a more accurate labeling of New York specimens but also as a guide to collectors, teachers and students in their field excursions.

The data have been largely compiled from the mineralogic and geologic publications given in the bibliography and have, in a number of cases, been added to, checked and modified by field notes and by the study of specimens from the collections mentioned in the list of authorities. Such a list must, from its character, be incomplete in many points and the author would gladly welcome any information which would render a subsequent edition more comprehensive and accurate.

The author is indebted to Dr F. J. H. Merrill, state geologist, for many valuable suggestions regarding the general character of the work and for much of the geographic and geologic informa-

tion embodied in the text. Acknowledgment is also tendered to the gentlemen whose names appear in the list of authorities for local information.

RELATIONS OF MINERAL DEPOSITS TO ROCKS

By far the greater part of the crystallized minerals of New York State occur in igneous and metamorphic rocks, or grouping these two divisions in a rather broader term, in crystalline rocks. The areas covered by these embrace two important sections of the State; the northern section including the Adirondack region and extending over St Lawrence, Jefferson and Lewis counties on the west and the southeastern section including New York, Westchester, Putnam and portions of Orange, Rockland, Richmond and Dutchess counties. The area of Silurian limestones, extending from west to east across the State just south of Lake Ontario and trending to the south along the west shore of the Hudson, affords many localities for secondary minerals notably calcite, dolomite, celestite, barite, quartz etc.

Igneous rocks

Granites and pegmatites. The component and accessory minerals of granite are commonly found in independent well formed individuals in cavities or vugs where the open space admits of free development of crystals formed by the separation of the mineral constituents from the fused rock magma in the process of its solidification. Pegmatite occurring in dikes and veins is characterized by the same genetic series of minerals found in granite but commonly in rather larger individuals corresponding to the coarser structure of the rock.

COMMON MINERALS FORMING AND OCCURRING IN GRANITE AND PEGMATITE

pyrite	microcline	epidote
marcasite	oligoclase	allanite
quartz	spodumene	tourmalin
corundum	amphibole	muscovite
chrysoberyl	beryl	biotite
rutile	garnet	titanite
orthoclase	zircon	xenotime
albite	topaz	apatite

Gabbros, diorites and other basic igneous rocks. Rocks of this series have for their chief feldspar constituents the plagioclases; both orthorhombic and monoclinic pyroxenes occur as component minerals. The formation of individual crystals takes place as the rock grades from finer to coarser structure and gives rise to strings or zones of crystallized minerals rather than pockets and cavities as is the case with granite.

COMMON MINERALS FOUND IN BASIC IGNEOUS ROCKS

magnetite	labradorite	garnet
ilmenite	enstatite	biotite
spinel	hypersthene	chrysolite
albite	pyroxene	titanite
anorthite		

Metamorphic rocks

Gneisses. Typical gneiss differs but little in mineralogic composition from typical granite. The mineral constituents are, however, to be found in larger and better formed individuals along zones of contact with crystalline limestone and local areas of magmatic segregation.

COMMON MINERALS FOUND IN GNEISS

graphite	hematite	sillimanite
chalcopyrite	orthoclase	cyanite
pyrite	albite	allanite
marcasite	amphibole	tourmalin
quartz	pyroxene	staurolite
corundum	garnet	muscovite
spinel	vesuvianite	biotite
magnetite	zircon	monazite
rutile	andalusite	apatite

Crystalline limestones. The crystalline limestones are prolific in accessory minerals which occur disseminated through the mass of the rock, in pockets or vugs or in zones of contact between the limestone and an adjacent igneous intrusive rock.

COMMON MINERALS FOUND IN CRYSTALLINE LIMESTONES

graphite	dolomite	garnet
sphalerite	siderite	titanite
pyrite	pyroxene	tourmalin
marcasite	wollastonite	chrysolite
quartz	amphibole	humite group
corundum	wernerite	muscovite
spinel	vesuvianite	phlogopite
rutile	zircon	clinochlore
brucite	danburite	talc
calcite	epidote	apatite

Crystalline schists. A characteristic series of minerals, for the most part silicates, is found in micaceous, hornblendic and argillaceous schists. They occur embedded and disseminated through the mass of the rock and reach their highest development along the contact portion of the rock mass.

COMMON MINERALS FOUND IN CRYSTALLINE SCHISTS

quartz	cyanite	biotite
chrysoberyl	andalusite	iolite
amphibole	sillimanite	tourmalin
garnet	staurolite	beryl
zircon	muscovite	

Serpentines and talc. The minerals occurring in serpentine are in some cases the unaltered species from which the serpentine was derived, in other cases secondary minerals resulting from a further alteration of the serpentine. They occur embedded and in veins of various thickness traversing the serpentine masses.

COMMON MINERALS FOUND IN SERPENTINE AND TALC

quartz (chalcedony)	magnesite	garnet
spinel	enstatite	clinochlore
chromite	pyroxene	talc
brucite	amphibole	deweylite
dolomite	chrysolite	apatite
calcite		

Secondary minerals

Secondary minerals, developed as a result of chemical action on previously formed rocks, are, to a large extent, deposited by percolating water. With regard to their mode of occurrence they may be classified as follows: (1) concretions; (2) deposits lining the interior of cavities, vugs, caverns and grottos; (3) vein formations; (4) minerals produced through pseudomorphism and paramorphism.

Concretions. Concretionary deposits of mineral matter are frequent in rocks of sedimentary origin. They are in general formed by the deposition, in successive layers around some organic center, of mineral matter leached from the surrounding rock. The calcium carbonate concretions found in clay beds are excellent types of this form of mineral occurrence. Concretionary forms of quartz, siderite, pyrite, chalcocite etc., are also formed in sedimentary rocks.

Deposits lining the interior of cavities, etc. The formation of secondary minerals in cavities of various origin results from the chemical action of percolating water on the rock adjacent to and forming the walls of the cavity. The soluble mineral matter is dissolved from the rock traversed by the descending surface water to be redeposited, sometimes in an entirely different form in the open spaces. The minerals thus deposited take the form of distinct crystallizations or of concentric, incrusting masses.

COMMON SECONDARY MINERALS OCCURRING IN CAVITIES

hematite	barite	apophyllite
limonite	celestite	stilbite
quartz	anhydrite	chabazite
calcite	gypsum	heulandite
dolomite	serpentine	harmotome
siderite	sulfur	analcite
aragonite	datolite	natrolite
strontianite	prehnite	

Vein formations.¹ Mineral veins may, with justice, be considered as constituting a division under the last named class of secondary mineral deposits; the distinctive character of the

¹The formation of mineral veins has been very fully discussed by Posepny, F. *Genesis of Ore Deposits*. Am. Inst. Min. Eng. Trans. 1893. p. 23-197.

minerals found in veins has, however, led the author to consider them under a separate head. The large and important group of vein minerals includes most of the ores of commercial importance, particularly the metallic sulfids and sulfosalts.

VEIN MINERALS OF COMMON OCCURRENCE IN NEW YORK STATE

galena	fluorite	dolomite
sphalerite	quartz	siderite
millerrite	cuprite	strontianite
pyrrhotite	hematite	orthoclase
chalcopyrite	magnetite	prochlorite
pyrite	rutile	barite
marcasite	brucite	celestite
arsenopyrite	calcite	gypsum

Minerals produced through pseudomorphism and paramorphism. Minerals included in this group are alteration products of primary minerals. These, while retaining the external form of the primary minerals, from which they were derived, differ essentially from them in composition.

Drift boulders

Transported masses of rock are found in all parts of New York State, frequently in boulders of considerable size. These are fragments of rock which, through action of glacial or fluvial erosion and transportation have been torn from their parent outcrops and have been carried, generally to the south and east of their original sources. The distance which the drift boulder may have been carried by the ice sheet in the glacial period varies widely so that no accurate estimate can be made of the distance between any glacial fragment and its parent mass.

SOURCES AVAILABLE FOR COLLECTING MINERAL SPECIMENS

The sources available for the collection of mineral specimens may be classified as follows:

Sources	natural	<ul style="list-style-type: none"> surface outcrops drift boulders caves
	artificial	<ul style="list-style-type: none"> mines and quarries excavations for construction: foundations of buildings, sewers, subways prospects

Surface outcrops. The surface outcrops of rocks of all formations but particularly unstratified rocks may be studied with considerable profit by the mineral collector in search of specimens. A judicious use of the hammer and cold chisel will often expose, under an unpromising cluster of weathered and decomposed crystals, fresh material well worth the labor expended on its development. The precipitous faces of cliffs and escarpments, furnish in some cases profitable sources for the collection of specimens.

Drift boulders and fragments. While in some instances drift boulders, notably those composed of crystalline rock, are valuable sources of mineral specimens the uncertainty regarding the original locality from which they were derived tends to render questionable the value of such specimens. A source of mineral material which may be classed under this head and which is often of more value than drift fragments embedded in the soil is the fragmental rock material used in the construction of stone walls. The accessibility of these to the roads and the comparative ease with which their component fragments may be identified with the country rock should not be overlooked by the collector particularly in a region of crystalline schists.

Natural caves. Subterranean tunnels and caverns, formed principally in limestones by the mechanical and chemical erosion of underground waters, frequently become repositories for secondary minerals deposited on the sides and roof as a result of the leaching action of percolating surface water. The exploration of these natural caves often results in the discovery of beautiful crystallizations which from the nature of their deposition are readily detachable.

Mines and quarries. Probably nowhere is the mineral collector better repaid for his trouble than in exploring the dump heap of a mine. The waste material representing, as most of it does, the contents of the contact zone between the vein or ore body and the country rock is usually rich in ore minerals as well as in crystallizations of accessory minerals from the country rock. Similarly but to a somewhat less extent the rejected material from a granite or limestone quarry is a profitable collecting source.

Excavations for building and improvements. From the casual manner in which these workings penetrate rock formations with respect to productive mineral zones they are hardly calculated to furnish the wealth of mineral specimens met with in mining and quarrying operations. It is, however, true that many rich finds such as, for example, the dumortierite of New York island have resulted from excavations for foundations of buildings, sewer diggings and other municipal improvement works. The accessibility of these excavations to the centers of population often results in a more careful study of the excavated material and in the finding of obscure mineral occurrences which might otherwise escape notice. Rocks exposed in railroad cuts and tunnels may also be said to constitute an important subclass under this head and possess the added advantage of being permanently available for collecting purposes.

Prospects. The use of rudimentary mining tools and methods is of considerable value in the acquiring of mineral specimens particularly in regions where mining and quarrying operations are not generally pursued. In most cases a knowledge of the prevailing dip and strike of the country rocks and of the location of the zones of contact between their strata will enable the collector to reach with the aid of a pick and shovel points where the component and accessory minerals occur in well crystallized aggregates. In some cases a blast exploded in a properly drilled hole will amply repay for the expense and trouble incurred, but of course such procedure should be attended with the greatest caution.

EXPLANATION OF LIST

In the following tabulated list of localities the first and fifth columns contain the numbers which have been assigned to each locality in order to furnish a ready and convenient means of reference. The second column gives with as much detail as is available the geographic position of the localities grouped under counties and towns. As far as possible definite geographic locations have been substituted for old names of farms, etc.; it has been the author's experience that it is at present extremely difficult to locate the original mineral locality by the old farm name. The third column gives a list of the mineral species

occurring at each locality. The fourth column contains descriptive notes regarding such crystallographic, structural, or other features as may be characteristic of the mineral occurrence. The sixth column is reserved for a quality mark which is assigned to certain occurrences to indicate the mineralogic quality or commercial importance of the material as follows:

xx indicates very fine specimens

x indicates fine specimens

* indicates that the mineral has been mined or quarried

† indicates that the mines or quarries are no longer operated

The absence of any of the above symbols in the sixth column opposite any given species indicates the occurrence of specimens of ordinary grade.

In the seventh column is noted the character of the rock in which the mineral species occurs, this in many cases being common to all the species found in any locality.

The eighth column contains a list of the mineral species associated with the mineral noted in the third column. This in many instances constitutes a genetic association which is of interest from the standpoint of the formation of minerals.

The numbers and letters given in the ninth column refer to the published and unpublished authorities as given in the following bibliography and list of unpublished authorities.

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g Mr E. C. Eckel
h Mr Gilbert van Ingen
j Mr W. W. Jefferies
k Prof. J. F. Kemp
l Mr H. O. Clough
m Dr F. J. H. Merrill
p Mr H. S. Peck
w The author

ALBANY

NO.	LOCALITY	SPECIES	DESCRIPTION
Bethlehem			
1	Kenwood, north bank Normans kill . . .	calcite.....	small nail head crystals.....
		quartz.....	small crystals.....
		pyrite.....	nodular concretions and crystals..
2	1½ m. n. w. Coeyman.....	epsomite.....	efflorescence on limestone.....
		calcite.....	stalactites and sinter.....
		gypsum.....	massive and snowy.....
3	Crystal hill, Glenmont.....	quartz.....	crystals.....
Coeyman			
4	Coeyman.....	gypsum.....	selenite crystals.....
New Scotland			
5	Indian Ladder.....	calcite.....	crystals.....
		pyrite.....	small crystals.....
6	1 m. e. Indian Ladder.....	calcite.....	small brilliant crystals.....
		dolomite.....	white and pinkish aggregates.....
		aragonite.....	radiating needles.....
7	½ m. s. of New Salem.....	pyrite.....	small bright crystals.....
Watervliet			
8	Campbell.....	quartz.....	yellow drusy crystals.....

ALLEGANY

The Devonian shales and sandstones have been successfully drilled for petroleum in many in mineral localities.

BROOME

The Devonian shales, sandstones and conglomerates of this county do not include mineral

CATTARAUGUS

The Devonian shales and sandstones which constitute the rocks of this county have been otherwise these formations are unprolific in mineral localities.

CAYUGA

Auburn			
9	at base of hill on e. bank Owasco creek	celestite.....	thin radial blades.....
		calcite.....	in minute crystals and rounded masses.....
		fluorite.....	.....
		epsomite.....	.....
Springport			
10	Thompson's plaster beds.....	sulfur.....	semicrystalline.....
		gypsum.....	selenite.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
1	vein in shale		quartz.....	w
	"		calcite.....	w
	in shale.....			w
2	on limestone.....			5, 43
	in shale.....		gypsum.....	5, 43
	"		calcite.....	5, 43
3	"			5, 43
4	in clay.....			5, 43
5	in limestone.....			l
	"			l
6	"		dolomite, aragonite.....	l
	"		calcite.....	l
	"		"	l
7	in shale.....			w
8	"			5, 43

COUNTY

localities in the southern section of the county, otherwise these formations are not prolific

COUNTY

localities of sufficient importance to note in this list.

COUNTY

successfully drilled for petroleum in many localities in the southern section of the county,

COUNTY

9	in dark Salina limestone	calcite, fluorite etc.....	5, 43
	in slate.....	celestite.....	5, 43
	in Salina limestone.....	" calcite.....	5, 43
	"	calcite, fluorite.....	5, 43
10 xx	in gypsum of Salina.....		5, 43
x.	"	sulfur.....	43

CAYUGA

NO.	LOCALITY	SPECIES	DESCRIPTION
	Union Springs		
11	.....	gypsum	selenite.....
		calcite.....	modified and twin crystals.....
		dolomite.....	curved crystals.....
		quartz.....	crystals

CHAUTAUQUA

The Devonian shales and sandstones which constitute the rocks of this county do not include

CHEMUNG

See Chautauqua

CHENANGO

See Chautauqua

CLINTON

	Ausable		
12	Arnold hill mines 1½ m. w. Ferrona	magnetite	medium fine crystalline.....
		fluorite.....	purple and green.....
		pyrite .....	.....
		quartz	red jasper
13	Cook mine 1½ m. e. Ferrona	magnetite	medium fine crystalline
		calcite.....	sharp needle crystals, radiating ..
		amphibole.....	crystals, dark green to black.....
		"	black fibrous hornblende.....
		oligoclase.....	in broadly striated cleavages.....
14	Winter mine 4½ m. e. Ferrona.....	magnetite .....	.....
	Black Brook		
15	Palmer hill mines 1½ m. n. Ausable Forks	magnetite	coarse grained.....
		orthoclase	flesh-colored
16	Tremblay's mine 1½ m. w. Clayburg....	magnetite .....	.....
17	Bowen & Signor's mine, Williamsb'g ..	" .....	.....
	Chazy		
18	Chazy.....	calcite.....	small nail head crystals.....
	Dannemora		
19	Dannemora.....	magnetite .....	.....
20	Chateaugay mines Lyon Mountain....	"	coarse crystalline ore.....
		apatite.....	rounded grains
21	Lyon Mountain near Roger's field....	pyroxene.....	long, well formed crystals with granular core.....

COUNTY (*continued*)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
11	x.....	in Onondaga limestone.....	calcite, dolomite	43
	xx	"	dolomite.....	140
	xx	"	calcite.....	140
	.....	" .....	" .....	140

COUNTY

mineral localities of sufficient importance to note in this list.

COUNTY

county.

COUNTY .

county.

COUNTY

12	x*.....	veins in gneiss.....	quartz, feldspars.....	149, 194
	x.....	"	" calcite.....	43
	.....	" .....	" .....	e
	.....	vein in gneiss	magnetite	e
13	*.....	veins in gneiss.....	.....	e
	.....	" .....	.....	e
	x	"	magnetite, feldspar	e
	.....	in gneiss.....	feldspar	e
	x	"	amphibole (hornblende) ...	e
14	* †.....	" .....	.....	194
15	*.....	"	orthoclase	149, 194
	.....	" .....	magnetite, quartz	149
16	* †.....	.....	.....	149, 194
17	*.....	.....	.....	149
18	.....	fault plane in limestone.....	.....	h
19	*.....	.....	.....	194
20	*.....	in granite.....	apatite, quartz etc.....	194
	.....	" magnetite .....	.....	m
21	.....	" Bostonite dikes	plagioclase, olivin.....	159

NO.	LOCALITY	SPECIES	DESCRIPTION
Ancram			
22	Ancram lead mines.....	galena.....	foliated and granular.....
		sphalerite.....	yellow and brown colors.....
		chalcopyrite.....	large masses with blue tarnish....
		wulfenite .....	.....
		serpentine.....	.....
23	½ m. s.e. Ancram lead mines.....	albite.....	small transparent crystals.....
24	{ Morgan iron mine 2m. n. Ancram lead mines.....	limonite.....	{ loose decomposed ore cut by concretionary siderite.....
		siderite.....	
25	Reynolds mine ½ m. e. Halstead.....	limonite.....	.....
		siderite.....	.....
Austerlitz			
26	.....	chalcocite.....	massive.....
Canaan			
27	.....	chalcopyrite.....	.....
		chalcocite.....	massive.....
Copake			
28	Copake N. Y. & H. R. R.	limonite.....	large ore beds.....
		graphite.....	.....
Hillsdale			
29	group of 3 mines, 3m. e. Hillsdale, 3m. n.e. Hillsdale, 1½ m.e. N. Hillsdale....	limonite.....	.....
Greenport			
30	near Hudson.....	gypsum.....	selenite.....
		wad.....	.....
		siderite.....	loose, decomposed material.....
		dolomite	grading into ankerite.....
		epsomite.....	efflorescences on slate.....
		calcite	small prismatic crystals
Livingston			
31	Burden mines 2 m. s.e. Linlithgo.....	siderite.....	massive material altering to limonite.....
		quartz.....	small crystals.....
Stuyvesant			
32	s. of Cary Brick Co., Coxsackie....	gypsum.....	selenite crystals.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
22	*†.....	vein in talcose slate.....	sphalerite, chalcopyrite....	5, 43
	*†.....	".....	galena.....	5, 43
	*†.....	".....	sphalerite, galena.....	5, 43
	.....	".....	.....	5, 43
	.....	".....	.....	w
23	x.....	in quartz vein.....	quartz.....	w
24	{*†.....	" slate.....	.....	149, 194
	{*†.....	".....	.....	149, 194
25	*†.....	.....	.....	149, 194
	.....	.....	.....	149, 194
26	.....	in quartz vein traversing limestone.....	.....	5
27	.....	in veins of galena.....	.....	43
	.....	".....	.....	5, 43
28	*.....	in slaty rock and limestone.....	.....	43, 149, 194
	.....	.....	.....	43
29	*†.....	in crystalline limestone.....	.....	194
30	xx.....	.....	.....	43
	x.....	.....	.....	43
	x.....	.....	.....	43
	.....	.....	.....	43
	.....	.....	.....	5
	.....	in Helderberg limestone.....	.....	w
31	*†.....	in shale.....	quartz.....	194
	.....	seams and pockets in iron ore.....	siderite.....	w
32	x.....	in clay bank.....	.....	w

CORTLAND

The Devonian rocks of this county do not include mineral

DELAWARE*See Cortland***DUTCHESS**

NO.	LOCALITY	SPECIES	DESCRIPTION
Amenia			
33	Manhattan mine, Sharon Station } Amenia mine, Amenia }	limonite.	
		turgite.	
		siderite.	
		chalcopyrite.	
Beekman			
33a	Sylvan Lake mines, near Sylvan Lake	limonite.	
Dover			
34	Dover Plains marble quarry.	dolomite.	massive.
		amphibole.	tremolite.
35	Deuel Hollow mine 2m. s.e. South Dover	limonite.	
36	Dover mine, Dover Furnace station. . .	"	
		staurolite.	small crystals.
		garnet.	small red and brown crystals.
East Fishkill			
37	Pecksville.	graphite.	foliated and granular.
		talc.	gray and white of uneven structure
		amphibole.	pale green actinolite and hydrous anthrophyllite.
		pyroxene.	augite.
38	Fishkill iron mines East Fishkill.	limonite.	
Northeast			
39	near Smithfield.	chalcocite.	
		chalcopyrite.	
		galena.	
		sphalerite.	
40	Riga Mine, Mount Riga.	limonite.	
40a	Malby mine, 1½ m. n.e. Millerton	"	

COUNTY

localities of sufficient importance to note in this list.

COUNTY

county.

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
33	x*†.....	in grayish blue limestone.....	siderite etc.....	149, 194
	x*†.....	".....	limonite.....	43
	x*†.....	".....	".....	43
	.....	".....	".....	5
33a	*†.....	".....	.....	149, 194
34	.....	in crystalline limestone.....	.....	5, 43
	.....	".....	dolomite.....	5, 43
35	x*†.....	".....	.....	149, 194
36	.....	between strata of mica schist.....	.....	149, 194
	.....	in mica schist.....	garnet.....	5, 43
	x.....	".....	staurolite.....	5, 43
37	.....	in vein of granite.....	.....	3
	.....	.....	.....	5, 43
	x.....	in talc and limestone.....	.....	5, 43
	.....	" limestone.....	amphibole, dolomite.....	43
38	x*†.....	" schist.....	.....	149, 194
39	.....	.....	.....	5, 43
	.....	.....	.....	43
	.....	.....	.....	43
	.....	.....	.....	43
40	*†.....	in limestone.....	.....	149, 194
40a	*†.....	".....	.....	149, 194

DUTCHESS

NO.	LOCALITY	SPECIES	DESCRIPTION
Pawling			
41	Pawling mine 2½ m. w.n.w. of Pawling.	limonite.....	.....
Poughkeepsie			
42	s. end of r.r. cut at Mine Point.....	anthracite.....	.....
Unionvale			
43	Clove mine.....	limonite.....	.....
		gibbsite.....	.....

ERIE

The Devonian rocks in the vicinity of

ESSEX

Chesterfield			
44	s.w. corner of town.....	magnetite.....	titaniferous.....
Crown Point			
45	iron mines, Hammondsville.....	magnetite.....	medium fine crystalline.....
		pyroxene.....	small black crystals.....
46	1 m. s. Hammondsville.....	apatite.....	elongated terminated prisms.....
		apatite.....	mamillary eupyrcroite.....
		tourmalin.....	fine brown crystals.....
		chlorite.....	.....
		quartz.....	crystals.....
		calcite.....	.....
		pyrite.....	crystals.....
		garnet.....	brown crystals.....
		wernerite.....	.....
		oligoclase.....	aventurin.....
		zircon.....	crystals.....
		chalcopyrite....	.....
		epidote.....	small imperfect crystals.....
47	Skiff mine 2 m. s. Hammondsville.....	magnetite.....	.....
Elizabethtown			
48	Gates mine 1m. s.e. New Russia.....	".....	titaniferous.....
Keene			
49	Weston mine 1m. s.w. Keene.....	".....	.....
50	2m. s.e. Keene.....	pyroxene.....	black crystals.....
51	Mount Marcy.....	".....	dillage in foliated masses.....

See also locality 65.

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
41	*†	in limestone.....		149, 194
42	*†	in green shale.....	quartz.....	h
43	*			43
				43

COUNTY

Buffalo furnish considerable natural gas.

COUNTY

44	*†	in norite.....		194
45	*	in gneiss.....	quartz, plagioclase.....	149, 194
		".....	magnetite.....	159
46	x	in limestone.....	calcite.....	5, 43
	x*†	".....	quartz.....	5, 43, 91
	xx	".....	apatite, orthoclase.....	43
		".....		43
		".....		43
		".....		43
	x	".....		5, 43
	x	in gneiss, at contact.....		43
	x	".....	orthoclase, magnetite.....	43
		".....	quartz, ".....	5, 43
		".....		43
		".....	quartz.....	43
			" oligoclase.....	43
47				194
48	*†	in gabbro.....		149, 194
49	*†	in crystalline limestone.....	calcite, epidote.....	149, 194
50		".....	wernerite.....	159
51		in gabbro.....		159

NO.	LOCALITY	SPECIES	DESCRIPTION
Lewis			
52	Lewis Corners.....	wollastonite....	abundant.....
		labradorite....	dark gray, brilliant play of colors. .
		amphibole....	actinolite, hornblende.....
		arsenopyrite....	massive.....
53	Cross.....	wollastonite....	abundant.....
		garnet.....	colophonite.....
Minerva			
54	Minerva mine.....	magnetite.....	
Moriah			
55	Sanford ore bed 6m. w. Port Henry....	".....	
		apatite.....	green and brown crystals.....
		allanite.....	large crystals.....
		lanthanite.....	in delicate scales.....
		amphibole....	actinolite and hornblende.....
56	Mineville, Hall ore bed.....	magnetite.....	medium fine grained.....
		zircon.....	cinnamon red.....
57	Mineville, mine 21 etc.....	magnetite.....	in beautifully developed crystals ..
		zircon.....	large crystals.....
58	6m. n.w. P't H'n'y (Roe's spar bed) ..	tourmalin.....	in prisms sometimes altered inter- nally
		muscovite.....	
		quartz.....	rose quartz.....
	Tredway quarry.....	serpentine....	verd antique marble.....
59	Port Henry (Pease quarry etc.).....	pyroxene.....	jet black massive and crystals.....
		".....	white & pink diopsid in crystals....
		pyrite.....	crystals.....
		pyrrhotite....	strongly magnetic.....
		graphite.....	massive.....
		amphibole....	hornblende.....
		wollastonite....	crystalline.....
		orthoclase.....	adularia sometimes in minute transparent crystals.....
		titanite.....	yellowish brown.....
		tourmalin.....	brown.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
52	.....	in gabbro	garnet, quartz etc.....	5, 43
	x.....	" .....	.....	5
	.....	" .....	.....	5, 43
	.....	" .....	hornblende.....	5, 43
53	.....	" .....	amphibole, garnet.....	5, 43
	.....	" .....	.....	5, 43
54	*†.....	.....	.....	194
55	*†.....	in gneiss.....	apatite, amphibole.....	5, 43, 149, 175, 194
	.....	" .....	.....	5, 43
	xx.....	"	magnetite, apatite	12, 39, 162
	.....	in fissures in the ore and on allanite....	magnetite, allanite	12, 43
	.....	.....	magnetite, allanite.....	5, 43
56	x*.....	in gneiss.....	zircon.....	43, 194
	x.....	" quartz vein.....	magnetite.....	5, 43
57	xx*.....	" gneiss.....	apatite.....	43, 194
	x.....	" quartz.....	magnetite.....	43
58	x.....	" granular limestone .....	.....	5, 43, 98, 221
	.....	" .....	.....	5
	x.....	" .....	.....	5, 43, 98
	x.....	" .....	.....	5, 43, 131
59	x.....	"	magnetite.....	5, 159
	x.....	"	titanite, amphibole etc.....	5, 159
	x.....	"	pyrrhotite.....	5, 43
	.....	" .....	pyrite.....	5, 43
	.....	" .....	tourmalin, pyroxene.....	43
	.....	" .....	oligoclase, quartz	98
	.....	" .....	pyroxene, albite.....	5, 43
	x.....	"	pyroxene, titanite etc.....	5, 43
	x.....	"	amphibole.....	98
	xx.....	"	" titanite.....	98

NO	LOCALITY	SPECIES	DESCRIPTION
Moriah (continued)			
60	Mill brook 2m. n.w. of Port Henry.....	calcite.....	crystals.....
		quartz.....	smoky.....
		pyroxene.....	
		graphite.....	small hexagonal crystals.....
61	Cheever mine 2m. n. Port Henry.....	magnetite.....	fine crystalline ore.....
		albite.....	greenish.....
		pyroxene.....	augite.....
Newcomb			
62	Adirondack mines near Lake Sanford..	magnetite.....	fine grained titaniferous.....
		labradorite....	deeply striated.....
		hypersthene....	
63	South shore Lake Harris 1m. e. of Newcomb.....	tourmalin.....	brown and green.....
		titanite.....	twinned crystals.....
		zircon.....	greenish black.....
		muscovite.....	yellowish green.....
		wernerite.....	semitransparent.....
		albite.....	opalescent mainly in druses.....
64	McIntyre 2m. s.e. Lake Sanford.....	labradorite....	
		garnet.....	
		magnetite.....	
North Elba			
65	a Cascadeville, 6m. s.e. Lake Placid ...	pyroxene.....	light green rounded grains.....
Schroon			
66	Paradox Lake mines.....	magnetite.....	
		calcite.....	fine green translucent masses.....
		pyroxene.....	
		chondrodite ..	
		tourmalin.....	crystals.....
		wernerite.....	
Ticonderoga			
67	Chilson lake (Paragon lake).....	apatite.....	
		garnet.....	
		pyroxene.....	crystals and coccolite.....
		vesuvianite....	
		wernerite.....	
		magnetite.....	
		calcite.....	blue.....

a This locality extends into Keene.

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
60	x.....	in white limestone.....	pyroxene, amphibole, albite.	5, 43, 98
	x.....	".....	calcite.....	5
		".....	" amphibole etc.....	43
		".....	".....	98
61	x*.....	Grenville schist.....		149, 194
		".....	magnetite.....	5
		".....	" labradorite.....	159
62	*†.....	in gabbro.....	labradorite, hypersthene....	149, 194
		".....	hypersthene.....	43
		".....	labradorite.....	43
63	xx.....	in Grenville limestone.....	apatite, zircon etc.....	135
	x.....	".....	".....	135
	x.....	".....	tourmalin, apatite.....	135
		".....		135
		".....		135
		".....		135
64	x.....	in gabbro.....	magnetite.....	43
		".....		43
	x.....	".....	labradorite.....	43
65		in calcite vein.....		159
66	*†.....	in Grenville limestone.....	proxene, chondrodite.....	194
	x.....	".....	".....	5, 43
		".....	wernerite, calcite.....	43
	x.....	".....	tourmalin, wernerite.....	43
		".....	chondrodite etc.....	43
		".....	pyroxene, calcite.....	5
67		contact gneiss and limestone.....		43
	x.....	".....		43
	x.....	".....		5, 43
		".....		5, 43
	x.....	".....	pyroxene, calcite.....	43
		".....		43
		".....		43

ESSEX

NO.	LOCALITY	SPECIES	DESCRIPTION
Ticonderoga (continued)			
68	Kirby graphite mine 3m. n.w. Ticon'ga	graphite.....	crystals and folia
		pyroxene.....	large dark green crystals carrying inclusions of calcite
		wernerite..	perfect crystals.....
		titanite.....	yellowish gray crystals
		tourmalin.....	black
		apatite.....	.....
		calcite.....	light yellow
		quartz .....	.....
69	Mount Defiance	pyroxene.....	salite.....
		magnetite.....	.....
		cacoxenite.....	.....
70	Rogers Rock.....	graphite.....	.....
		wollastonite.....	.....
		garnet.....	crystallized and massive colo- phonite.....
		orthoclase	brown, red and yellow adularia..
		pyroxene.....	massive and granular coccolite..
		titanite.....	abundant small, brown crystals..
		calcite.....	masses of minute crystals.....
Westport			
71	Splitrock mine 5m. n.e. Westport	magnetite	fine grain titaniferous
		graphite.....	.....
		labradorite.....	.....
		prehnite.....	chiltonite.....
Willsboro			
72	.....	wollastonite.....	.....
		garnet.....	colophonite.....
		pyroxene.....	green coccolite
		amphibole.....	hornblende in interesting forms...
		quartz	milky.....

FRANKLIN

The rocks of this county afford no recorded mineral localities of sufficient importance

FULTON

The rocks of this county afford no recorded mineral localities of sufficient importance

GENESEE

Salt is mined and obtained in solution from the rocks of the Salina by drilling

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
68	xx*	in crystalline limestone and mica schist	calcite	43, 135
	xx	"	graphite wernerite	5, 43, 135
	x	contact limestone and gneiss.	" pyroxene etc	5, 43, 135
	. . . . .	in white granular and lamellar feldspar.	pyroxene, wernerite.	5, 43, 135
	. . . . .	"	wernerite, pyroxene.	5, 43, 135
	. . . . .		" . . . . .	135
	. . . . .	vein mineral.		135
	. . . . .	" . . . . .		135
69	. . . . .			5
	. . . . .			194
	. . . . .			5, 43
70	x	in crystalline limestone	pyroxene titanite.	43
	x	"	garnet, orthoclase.	5, 43
	x	"		5, 43
	. . . . .	" . . . . .		5, 43
	x	"	orthoclase, titanite	5, 43
	. . . . .	" . . . . .		5, 43
	. . . . .	" . . . . .		5
71	*†	in norite		149, 194
	. . . . .	" . . . . .		m
	. . . . .	" . . . . .		5, 43
	. . . . .	" . . . . .		43
72	x	in vein traversing gabbro	garnet.	5, 43
	x	"	wollastonite, pyroxene.	5
	x	"	" titanite, garnet.	5, 43, 175
	. . . . .	" . . . . .	black tourmalin	5, 43
	. . . . .	" . . . . .		e

COUNTY

to note in this list though minor localities undoubtedly occur in the crystalline rocks.

COUNTY

to note in this list though minor localities undoubtedly occur in the crystalline rocks.

COUNTY

through the Devonian rocks which cover the southern section of this county.

GREENE

NO.	LOCALITY	SPECIES	DESCRIPTION
Catskill			
73	Diamond hill, Catskill.....	quartz.....	fine large crystals.....
74	Austin's glen 2m. n.w. Catskill.....	calcite.....	massive and coarsely crystallized..
		quartz.....	small crystals.....
New Baltimore			
75	limestone quarry at New Baltimore...	calcite.....	interesting crystals.....
		quartz.....	crystals in parallel position.....

HAMILTON

The rocks of this county afford no recorded mineral localities of sufficient importance to note

HERKIMER

Fairfield			
76	Diamond hill 3m. n.e. Fairfield.....	quartz.....	crystals.....
		barite.....	massive yellowish white.....
Little Falls			
77	Little Falls.....	quartz.....	brilliant transparent crystals.....
		barite.....	yellowish white lamellar masses...
		dolomite.....	white and pearly crystals.....
78	1m.s. L. Falls in bed of small stream....	calcite.....	white crystals.....
		ankerite.....	} included under brown spar.....
		siderite.....	
		orthoclase....	flesh colored cleavages.....
Newport			
79	Middleville.....	quartz.....	detached crystals and groupings..
		calcite.....	flat crystals nail head type.....
		dolomite.....	white and pearly crystals.....
80	Newport.....	quartz.....	detached crystals.....
Salisbury			
81	Salisbury.....	quartz.....	crystals larger than preceding...
82	near Salisbury Center.....	sphalerite.....	
		galena.....	
		pyrite.....	
		chalcopyrite...	
83	.....	pyroxene.....	green coccolite.....
Stark			
84	near Starkville.....	celestite.....	fibrous, bluish or blue.....
		gypsum.....	

COUNTY

NO.	QUANTITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
73	x.....	embedded in stiff clay bet. layers of slate.....	.....	5, 27, 43
74	.....	veins in shale.....	quartz.....	w
	.....	".....	calcite.....	w
75	x.....	in Helderberg limestone.....	.....	p
	xx.....	".....	.....	e

COUNTY

in this list though minor localities undoubtedly occur in the crystalline rocks.

COUNTY

76	x.....	in Beekmantown limestone.....	barite.....	5, 43
	.....	".....	quartz.....	5, 43
77	xx.....	in cavities in Beekmantown limestone..	barite, calcite.....	5, 43
	.....	" Beekmantown limestone.....	quartz dolomite.....	5, 43
	.....	".....	calcite quartz.....	5
78	.....	Trenton limestone.....	siderite, orthoclase.....	5, 43
	.....	".....	calcite.....	43
	.....	".....	.....	5
79	xx.....	in cavities in Beekmantown limestone..	calcite, dolomite.....	5, 43
	x.....	" Beekmantown limestone.....	quartz ".....	5, 43
	.....	" cavities in Beekmantown limestone..	.....	5, 43
80	x.....	".....	.....	5, 43
81	xx.....	".....	.....	5, 43
82	.....	vein in gneiss.....	.....	5, 43
	.....	".....	.....	5, 43
	.....	".....	.....	43
	.....	".....	.....	5, 43
83	.....	in Beekmantown limestone.....	calcite.....	5
84	.....	in Salina waterlime.....	gypsum.....	5, 43
	.....	".....	celestite.....	43

JEFFERSON

NO.	LOCALITY	SPECIES	DESCRIPTION
Adams			
85	near North Adams.....	fluorite.....	pink and green.....
		barite.....	.....
Alexandria			
86	High island, St Lawrence river.....	tourmalin.....	long prisms.....
		amphibole.....	.....
		orthoclase.....	.....
		celestite.....	.....
87	Omar.....	beryl.....	.....
		hematite.....	.....
Antwerp			
88	Antwerp, Sterling mine.....	hematite.....	bright flat crystals and massive red
		stilpnomelane..	chalcodite in velvety brown masses
		siderite.....	small crystals and crystal. masses.
		ankerite.....	"
		millerite.....	capillary crystals lining cavities...
		quartz.....	small transparent crystals.....
		".....	chalcedony.....
		sphalerite.....	modified crystal (rare).....
		serpentine.....	red and green concentric bands...
89	aOxbow, west shore of Yellow lake...	calcite.....	large crystals and cleavages.....
		barite.....	porous coralloid.....
90	near Vrooman's lake.....	calcite.....	cleavage masses.....
		fluorite.....	green cubes.....
		pyrite.....	.....
		chalcopyrite...	.....
		vesuvianite....	terminated crystals.....
		phlogopite.....	.....
		pyroxene.....	green crystals.....
		titanite.....	.....
91	2m. s.w. Oxbow.....	limonite.....	bog iron ore.....
		serpentine.....	yellowish green
92	.....	orthoclase.....	.....
		wernerite.....	.....
		tourmalin.....	yellow (rare).....

a See also St Lawrence county.

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
85	.....	in limestone.....	barite.....	43, 77
	.....	“ .....	fluorite.....	43, 77
86	x.....	in gneiss.....	amphibole, orthoclase.....	5, 43, 77
	.....	“ .....	tourmalin, orthoclase....	5, 43
	x.....	“	“ etc.....	5, 43
	.....	in limestone.....		43
87	x.....	“ gneiss.....	feldspar.....	43
	.....	“ .....		43
88	x*.....	in gneiss.....	siderite, quartz etc.....	5, 43
	xx.....	“	calcite, hematite.....	20, 43
	x.....	“	hematite.....	43
	x.....	“	“	43
	xx.....	“	“	43, 78
	.....	“ .....	“ siderite etc.....	43
	x.....	“	“ “	c
	x.....	“	“	w
	.....	“ .....	“ .....	w
89	xx.....	in limestone.....		5, 43
	.....	“ .....	calcite.....	43
90	xx.....	vein in limestone.....	fluorite.....	43
	x.....	“	calcite.....	43
	.....	“ .....		43, 77
	.....	“ .....		43, 77
	.....	“ .....	pyroxene, titanite.....	43, 77
	xx.....	in gneiss.....	“	43
	x.....	“	titanite, phlogopite.....	5, 43
	.....	“ .....	pyroxene.....	43, 77
91	x.....	“	orthoclase.....	43
	x.....	in vein of crystalline limestone.....		5, 43
92	x.....	“ gneiss.....	wernerite.....	43
	.....	“ .....	orthoclase, titanite.....	43
	.....	“ .....		43

NO.	LOCALITY	SPECIES	DESCRIPTION
Brownville			
93	Brownville, banks of Black river.....	celestite.....	slender crystals
		calcite.....	.....
94	Pillar Point, Lee farm on n. shore.....	barite.....	massive banded structure
Clayton			
95	near Depauville.....	celestite.....	.....
Lyme			
96	Chaumont, Chaumont bay.....	"	slender white radiating needles...
Philadelphia			
97	Shirtliff mine, Philadelphia.....	hematite.....	.....
98	Indian river.....	garnet.....	.....
Theresa			
99	Theresa.....	fluorite.....	.....
		calcite.....	.....
		hematite.....	.....
		amphibole.....	.....
		serpentine .....	.....
		celestite.....	white crystalline masses.....
		strontianite....	"
100	s.e. bank of Muscalonge lake.....	fluorite.....	sea-green cubes.....
		phlogopite.....	.....
		chalcophyrite....	.....
		apatite.....	.....
Watertown			
101	banks of Black river.....	amphibole.....	white tremolite also brown & gray.
Wilna			
102	Natural Bridge.....	muscovite (giseckite)	in six sided prisms pseudomorphs after nephelite.....
		talc (steatite)..	pseudomorphs after apatite pyroxene, orthoclase etc.....
103	1m. n. Natural Bridge.....	calcite.....	modified white crystals.....
	2m. e. Natural Bridge, <i>see</i> Lewis co.		

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
93	.....	Trenton limestone.....	calcite.....	5, 43, <i>w</i>
	.....	" .....	celestite.....	43, <i>w</i>
94	*†.....	"	calcite.....	5, 43, 77, <i>w</i>
95	.....	" .....		5
96	.....	" .....		5, 43
97	*†.....	in gneiss.....		194
98	x.....	"		43
99	x.....	gneiss limestone contact.....	calcite, quartz.....	43
	x.....	"	fluorite.....	43
	.....	" .....	serpentine	43
	.....	" .....		43
	.....	" .....	hematite.....	43
	.....	" .....	calcite fluorite.....	43, 77
	.....	" .....	" .....	43
100	xx.....	in limestone gneiss contact.....	calcite, apatite.....	5, 43
	x.....	"	"	43
	.....	" .....		5, 43
	.....	" .....		43
101	.....	in Grenville limestone.....	calcite.....	5, 43
102	xx	in decomposed Grenville limestone.....		43
	.....	" .....		43
103	.....	in Grenville limestone.....		5, 43

LEWIS

NO.	LOCALITY	SPECIES	DESCRIPTION
Diana			
104	2m. e. Natural Bridge (Ashmore's f'rm)	apatite.....	large green crystals
		wernerite.....	white, bluish and dark gray crystals
		pyroxene	dark green to black crystals augite
		amphibole.....	tremolite
		talca.....	rensselaerite.....
		wollastonite....	abundant white crystals
		serpentine.....	variegated.....
		titanite.....	dark brown crystals.....
		zircon.....	rare.....
		quartz.....	doubly terminated crystals.....
		calcite.....	blue.....
		graphite.....	.....
		orthoclase.....	modified crystals.....
		hematite .....	.....
105	Harrisville, 2m. e. Bonaparte lake....	wollastonite....	large crystals.....
Greig			
106	Greig	magnetite.....	.....
		pyrite.....	.....
Martinsburg			
107	vicinity of Martinsburg, $\frac{1}{2}$ m. n.w. of Martinsburg.....	calcite.....	prismatic, terminated crystals....
		fluorite.....	green, nearly transparent crystals.
		pyrite.....	.....
		galena.....	modified cubes.....
		sphalerite.....	granular, massive.....

[LIVINGSTON

Salt and gypsum are obtained from the rocks of the Salina in a number of localities; sec-

MADISON

The rocks of this county afford no recorded mineral

MONROE

Rochester			
108	Pike's quarry.....	dolomite.....	in geodes.....
		calcite.....	in geodes also stalactites.....
		gypsum.....	selenite and snowy.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
104	XX.....	limestone syenite contact.....	calcite.....	5, 43
	XX.....	"	"	5
	XX.....	"	wernerite.....	5, 43, 155
				159, <i>i</i>
	X.....	"	calcite.....	43
	X.....	"	" serpentine	43, 77
	XX.....	"	" pyroxene	5, 43, 77, <i>i</i>
		"	talc.....	43
	X.....	"	wernerite, pyroxene.....	5, 43, <i>i</i>
		"	"	5, 43, 77
	X.....	"		43
		"	wernerite, pyroxene.....	<i>i</i>
		"	"	43
		"	"	<i>i</i>
		"	"	43
105		in decomposed Grenville limestone.....		43, c
106		in gneiss.....		43, 77
		"		43, 77
107	X.....	in Trenton limestone.....	fluorite, galena etc.....	5, 43
		"	calcite, pyrite, galena.....	5, 43
		"	galena, sphalerite, fluorite..	5, 43
		"	pyrite, sphalerite.....	5, 43
		"	" ^{sp} galena.....	5, 43

COUNTY

ondary celestite, barite and calcite are also found in septaria in Genesee shale at several places.

COUNTY

localities of sufficient importance to note in this list.

COUNTY

108	X.....	in Niagara limestone.....	calcite, celestite, gypsum....	5, 43, <i>h</i>
		"	dolomite etc.....	43, <i>h</i>
		"	"	43

MONROE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Rochester (<i>continued</i>)		
	Pike's quarry (<i>continued</i>)	celestite.....	nodular.....
		fluorite.....	occasionally in cubes.....
		barite.....	massive snowy.....
		galena.....	.....
		sphalerite	honey-brown crystals.....
108a	Gorge of Genesee river.....	hematite	Clinton ore.....

MONTGOMERY

	Palatine		
109	2m. e. Spraker's Basin.....	quartz.....	singly terminated crystals and drusy masses.....
		"	chalcedony.....
		garnet.....	.....
		anthracite.....	.....
	Root		
110	on Flat Creek 1½ m. s.e. Spraker's B's'n	sphalerite.....	minute transparent light yellow crystals.....
		barite.....	lamellar masses.....
		galena.....	.....
		pyrite.....	massive.....
		calcite.....	stalactitic.....
		dolomite.....	brown and pearly.....
111	near Spraker's Basin	rutile.....	minute crystals.....

NASSAU

The rocks of this county are deeply covered with drift and artificially

NEW YORK

112	Corlaer's hook, Canal st. and East river	hypersthene....	.....
113	Kip's bay, 34th st. and East river.....	heulandite.....	.....
114	38th st. and East river.....	epidote.....	.....
		orthoclase.....	pinkish crystals.....
115	42d st. and 4th av.....	siderite.....	spheric aggregates.....
		dolomite.....	crystals.....
116	43d-44th st. and 1st-3d av.....	molybdenite....	disseminated scales.....
		calcite.....	crystals crusted with pyrite.....
		beryl.....	small crystals.....
		tourmalin.....	black crystals.....
		muscovite.....	large brown crystals.....
		oligoclase.....	.....
		garnet.....	.....
117	W. 35th st.....	garnet.....	large crystal, 6 inches diameter...

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
		in Niagara limestone.....	dolomite etc.....	5, 43
		“	“	5, 43
		“	“	43, <i>h</i>
		“	sphalerite.....	5, 43
		“	galena, calcite, gypsum.....	5, <i>h</i>
108a	*†	“	“	<i>m</i>

COUNTY

109		in gneiss.....	garnet.....	5, 43
		“	“	5, 43
		“	quartz.....	5, 43
		“	“	43
110		in Trenton limestone.....	galena, barite.....	5, 43
		“	“ sphalerite, calcite.....	5, 43
		“	barite “	43
		“	“ “	5, 43
		“	galena, sphalerite etc.....	5, 43
		“	“	5
111		in Beekmantown limestone.....	“	5, 124

COUNTY

made land; deep excavations may however develop mineral localities.

COUNTY

112		granite boulder.....	“	5, 28
113		on mica schist.....	stilbite.....	43
114		granite vein.....	orthoclase, prochlorite.....	5
		“	epidote.....	5, 43, <i>c</i>
115		“	dolomite.....	<i>e</i>
		“	siderite.....	<i>e</i>
116		in mica schist.....	kalinite.....	61
		“	“	61
		“	“	61
		quartz vein.....	oligoclase, muscovite.....	5
		“	“ tourmalin.....	<i>c</i>
		“	muscovite “	<i>c</i>
		“	“ “	<i>c</i>
117	xx	in mica schist.....	muscovite.....	43

NEW YORK

NO.	LOCALITY	SPECIES	DESCRIPTION
118	Between 42d and 51st st. and 4th and 5th av.....	cyanite.....	
119	49th st. and 1st av.....	beryl.....	
120	Between 54th and 62d st., 10th av. to river.....	amphibole.....	hydrous anthophyllite.....
		serpentine.....	dark green.....
121	55th-56th st. and 1st-3d av.....	siderite.....	sphaerosiderite.....
122	69th-70th st. and 2d av.....	ilmenite.....	
		garnet.....	
123	64th st. and 10th av.....	stilbite.....	small sheaflike aggregates.....
124	65th st. and Boulevard.....	garnet.....	large, handsome crystals.....
		orthoclase.....	crystals.....
125	10th av.....	vesuvianite.....	
		garnet.....	
126	85th-86th st. and 9th-10th av.....	siderite.....	sphaerosiderite.....
		albite.....	small fine crystals.....
127	95th-105th st. and 3d-Lexington av....	ilmenite.....	
		garnet.....	
		stilbite.....	
		datolite.....	
128	100th-101st st. and 5th av.....	epidote.....	granular, decomposed.....
		albite.....	small fine crystals.....
		ilmenite.....	thin plates.....
		chabazite.....	translucent flesh-colored crystals..
129	102d st. and 4th av.....	garnet.....	crystals.....
		tourmalin.....	black.....
130	4th av. tunnel excavations.....	stilbite.....	radiated aggregates.....
		harmotome.....	small brown crystals.....
		apophyllite.....	
		natrolite.....	
131	120th st. and Hudson river.....	staurolite.....	small crystals.....
132	115th-122d st. and 4th-5th av.....	dumortierite....	azure blue.....
		sillimanite.....	fibrolite.....
133	138th st. and 11th av.....	epidote.....	
134	155th st. and 10th av.....	xenotime.....	small well modified crystals.....
		monozite.....	
		zircon.....	small acutely terminated crystals..
		garnet.....	" rough crystals.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
118	in hornblende schist.....	oligoclase, quartz, garnet....	43
119	x.....	“.....	.....	161
120	“ mica schist.....	serpentine.....	5, 43
	“.....	amphibole.....	43
121	“.....	c
122	“.....	orthoclase.....	c
	“.....	“.....	c
123	“.....	pyrite.....	e
124	xx.....	“.....	albite.....	e
	“.....	muscovite.....	e
125	granite boulder.....	orthoclase, garnet.....	c
	“.....	vesuvianite.....	c
126	in crystalline schist.....	muscovite.....	c
	“.....	“.....	c
127	in mica schist.....	garnet, albite.....	c
	“.....	ilmenite.....	c
	on	“.....	datolite.....	5
	“.....	stilbite.....	5
128	in “.....	mica.....	w
	“.....	on epidote.....	w
	in hornblende schist.....	clinoclase.....	e
	“.....	“.....	e
129	in mica schist.....	tourmalin.....	e
	“.....	e
130	on “.....	harmotome.....	5, 8
	“.....	stilbite etc.....	5
	“.....	“.....	8
	“.....	“.....	8
131	in mica schist.....	garnet.....	5, 43
132	xx.....	“ pegmatite vein.....	oligoclase, quartz.....	43, 49, 165
	“ mica schist.....	.....	43
133	“ hornblende schist.....	.....	43
134	x.....	“ pegmatite vein.....	monozite.....	138, 70
	“.....	zircon, garnet.....	138
	in pegmatite vein.....	garnet, quartz.....	e
	“.....	zircon, quartz.....	e

NEW YORK

NO.	LOCALITY	SPECIES	DESCRIPTION
135	159th st. and 11th av.....	beryl.....	small opaque crystals.....
136	Washington h'ts 171st st. & 11th av....	xenotime.....	small yellowish brown crystals. . .
		monozite.....	small crystals and parallel growths
		zircon.....	small, slender, prismatic crystals..
		dumortierite...	filiform inclusions and fibrous....
		muscovite.....	large crystals.....
		autunite.....	.....
137	176th-178th st. and 11th av.....	rutile.....	.....
		tourmalin.....	black.....
		garnet.....	almandite.....
138	180th st. & 10th av. (C. A. shaft 26)...	serpentine.....	.....
		rutile.....	.....
139	200th st. and 10th av.....	cyanite.....	light yellow.....
140	Fort George.....	tourmalin.....	black.....
		muscovite.....	green rhombic crystals.....
		garnet.....	grossularite.....
		titanite.....	greenish yellow crystals.....
		orthoclase.....	crystallized.....
		oligoclase.....	moonstone.....
		zircon.....	minute crystals.....
		amphibole.....	hornblende and actinolite.....
		malachite.....	radiating tufts.....
		stilbite.....	sheaflike aggregates.....
		epidote.....	small brilliant crystals also gran'lar
141	½ m. s. of Kings bridge.....	amphibole.....	tremolite.....
		prochlorite.....	.....
		titanite.....	brown and black.....
142	Inwood.....	amphibole.....	hydrous anthophyllite.....
		tourmalin.....	small brown crystals.....
		pyroxene.....	.....
143	Kings bridge (ship canal).....	pyrite.....	small brilliant crystals.....
		rutile.....	acicular, striated crystals.....
		pyroxene.....	malacolite.....
		tourmalin.....	green and brown prisms trigonal habit.. ..
		amphibole.....	tremolite.....

COUNTY (*continued*)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
135		in pegmatite vein.....	quartz.....	<i>e</i>
136	x.....	“.....	monozite, tourmalin.....	82
	x.....	“.....	xenotime, tourmalin.....	82
		“.....	“.....	82
		“.....	“.....	82
		“.....	“.....	82
		“.....	quartz, muscovite.....	82
137		in mica schist.....	calcite.....	<i>c</i>
		“ pegmatite vein.....	quartz, orthoclase.....	<i>e</i>
		“.....	“.....	<i>e</i>
138				131
		in crystalline limestone.....	pyrite.....	<i>e</i>
139		in pegmatite vein.....	orthoclase.....	<i>e</i>
140		“.....	“ quartz.....	<i>e</i>
	xx.....	“.....	“.....	<i>e</i>
		“.....	“ muscovite.....	<i>e</i>
	x.....	“.....	“.....	<i>e</i>
		“.....	muscovite, tourmalin.....	<i>e</i>
		“.....	quartz.....	<i>e</i>
		“.....	“ tourmalin.....	<i>e</i>
		“.....	orthoclase, quartz.....	<i>e</i>
	x.....	“.....	“.....	<i>e</i>
		“.....	“.....	<i>e</i>
		“.....	“.....	<i>e</i>
141		in dolomitic limestone.....	graphite.....	5
		“.....	amphibole.....	5
		“.....	“.....	5
142		“.....	serpentine.....	43
		“.....		43
				<i>m</i>
143	x.....	in dolomitic limestone.....	rutile, amphibole.....	5, 43, 133
		“.....	quartz, dolomite.....	5, 133
		“.....	tourmalin, muscovite.....	43
		“.....	amphibole pyrite.....	5, 43
		“.....	rutile.....	5, 43

NEW YORK

NO.	LOCALITY	SPECIES	DESCRIPTION
	Kings bridge (ship canal).....	muscovite.....	pale green, transparent crystals...
		quartz.....	clear and smoky crystals.....
		dolomite.....	crystals and massive.....
144	1m. n.e. Central bridge.....	clinochlore.....	green scales.....
145	Tremont (H. R. R. cut).....	kaolinite.....	gray, red and yellow.....
146	Morrisania.....	tourmalin.....	brown.....
147	Spuyten Duyvil.....	amphibole.....	asbestos.....
148	West Farms.....	titanite.....	small, reddish brown prisms.....
		epidote.....	.....
		amphibole.....	tremolite.....
		chabazite.....	crystals lining walls of seams.....
		heulandite.....	".....
		stilbite.....	".....
		apatite.....	.....
		garnet.....	.....

NIAGARA

	Lewiston		
149	.....	epsomite.....	.....
		calcite.....	lining geodes.....
		chalcopyrite.....	.....
	Lockport		
150	Lockport (canal cutting).....	celestite.....	lamellar, white and bluish white, opaque to transparent. Lin- ing geodes.....
		calcite.....	white and yellow dogtooth spar....
		gypsum.....	selenite and snowy.....
		anhydrite.....	blue, massive.....
		fluorite.....	occasionally in cubes.....
		dolomite.....	white & pink crystals lining geodes
		sphalerite.....	honey and wax yellow crystals, often transparent.....
	Niagara		
151	Niagara Falls.....	calcite.....	crystals lining geodes.....
		dolomite.....	pink to white crystals.....
		fluorite.....	.....
152	Niagara Falls, Goat island.....	sphalerite.....	in imperfect crystals.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
		in dolomitic limestone.....	amphibole, pyrite.....	5, 43, 133
		“	dolomite pyrite.....	133, c, e
		“	quartz etc.....	5, 133
144		“		43
145		“		123, 126
146		in pegmatite vein		e
147		“ mica schist		43
148		granite dikes.....	epidote, amphibole.....	5, 43
		“	amphibole, orthoclase	5, 43
		“	quartz etc.....	5, 43
		“	stilbite, heulandite.....	5, 43
		“	chabazite, stilbite.....	5, 43
		“	heulandite.....	5, 43
		in mica schist.....	garnet, muscovite.....	5, 43
		“	muscovite.....	5, 43

COUNTY

149		on limestone.....		43
		in “		5
		“	malachite (?).....	5
150	x	in Niagara limestone	calcite, dolomite etc.....	5, 43, k
	xx	“	dolomite, celestite etc.....	43, k
	x	“	“ anhydrite.....	5, 43, k
	x	“	calcite, gypsum.....	5, 43, k
	x	“	celestite “	5, 43, k
	x	“	calcite, celestite, gypsum.....	5, 43, k
		“		5, 43
151	x	in Niagara limestone.....	dolomite, celestite.....	43
	x	“	calcite, celestite, gypsum.....	5, 43
		“	“	43
152		in Lockport limestone.....		5, 43

ONEIDA

NO.	LOCALITY	SPECIES	DESCRIPTION
Boonville			
153	near Boonville w. bank Dry Sugar river	calcite	prismatic and nail head crystals . .
		wollastonite.	
		pyroxene.	coccolite.
		garnet.	
Kirkland			
154	Clinton, near Hamilton College.	sphalerite.	yellow, nearly transparent crystals
		strontianite.	in geodes, coating celestite.
		celestite.	in geodes.
155	Elliott and Paddon mines.	hematite.	oolitic.
New Hartford			
156	Davis ore bed.	hematite.	oolitic.
		wollastonite.	fibrous.
Rome			
157	near Rome.	sphalerite.	yellow, massive.
Vernon			
158	near Vernon.	"	"
Verona			
158a	Verona	hematite	oolitic.

ONONDAGA

Camillus			
159	Camillus railroad cut.	gypsum	selenite and fibrous.
		sulfur.	small masses in beds of earthy gypsum.
		calcite.	small incrusting crystals & fibrous.
Manlius			
160	Fayetteville 1m. n. of town.	gypsum.	occasionally in crystals, selenite. . .
		fluorite.	deep purple cubes.
Salina			
161	Liverpool.	gypsum.	fibrous.
162	Syracuse.	halite.	brine solution from wells etc.
		serpentine.	
		perovskite.	
		celestite.	
		gypsum.	selenite.
		barite.	interlaced plates.

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
153	x	veins in limestone.....		43
	x	in boulders.....	garnet pyroxene.....	5, 43
	x	".....	" wollastonite.....	5, 43
		".....	pyroxene ".....	5, 43
154		in shale and sandstone.....	hematite.....	5
		" Clinton and Niagara limestone.....	celestite.....	43, 168
		".....	strontianite.....	43
155	*†	in shale and limestone.....		149, 194
156	*	".....		149, 194
		".....		71
157				5
158				5
158a	*†	Clinton shale and limestone.....		149

COUNTY

159		in Salina waterlime.....	sulfur.....	5, 43
		".....	gypsum.....	5
		".....	".....	43
160		".....	fluorite.....	5, 43, <i>p</i>
		".....	gypsum.....	5, 43
161		in Salina.....		186
62	*	".....		66, 121, 192
	x	".....	perovskite.....	225, 226
		".....	serpentine.....	226
		".....	gypsum, barite.....	43
		".....	celestite ".....	43
		".....	gypsum, celestite.....	5, 43

ONTARIO

The Devonian rocks of this county have been suc-

ORANGE

NO.	LOCALITY	SPECIES	DESCRIPTION
Blooming Grove			
163	Craigsville.....	quartz	crystals and heliotrope
164	½ m. n.w. Washingtonville.....	labradorite.....	.....
Cornwall			
165	Deer hill 3m. s. of Cornwall.....	ilmenite .....	.....
		serpentine .....	.....
Highlands			
166	Bog Meadow pond 3m. w. of W. Point	zircon	white, reddish brown & black....
		chondrodite ..	granular
		spinel	black and green
		orthoclase	white, opalescent
		epidote.....	massive and somewhat fibrous....
		pyroxene.....	coccolite.....
		amphibole.....	.....
167	4m. s.e. Woodbury furnace.....	" .....	.....
		calcite.....	.....
		fosterite.....	boltonite
		magnetite .....	.....
		spinel .....	.....
168	Forest of Dean mine	pyroxene.....	coccolite, sahlite.....
	5m. s.w. West Point	forsterite.....	boltonite
		spinel	large crystals, black and green....
		magnetite .....	.....
		amphibole.....	pargasite
		wernerite .....	.....
		zircon	reddish brown and black
169	West Point.....	molybdenite.....	.....
		amphibole.....	tremolite, actinolite.....
		tourmalin.....	.....
		garnet.....	common
		epidote.....	.....
		pyroxene.....	diallage
		orthoclase.....	in crystals often flesh-color
		mica .....	.....
		wernerite	large, white, compact masses....
		titanite.....	.....
		allanite.....	tabular crystals

COUNTY

cessfully drilled for natural gas in several localities.

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
163	.....	veins in slate.....	.....	5, 43
164	.....	.....	.....	43, 74
165	.....	.....	.....	5, 43
	.....	.....	.....	5, 43
166	x	in crystalline limestone.....	chondrodite, spinel.....	5, 43
	x	“	spinel etc.....	5, 43
	x	“	chondrodite, zircon	5, 43
	x	“	epidote	5
	x	“	orthoclase	5, 43
	.....	“ .....	.....	43
	.....	“ .....	.....	5, 43
167	.....	in gneiss limestone contact.....	spinel etc.....	5, 43
	.....	“ .....	amphibole.....	74
	x .....	“ .....	.....	74
	.....	“ .....	.....	74
	.....	“ .....	.....	74
168	x	in crystalline limestone	spinel wernerite	74, 43
	.....	“ .....	pyroxene.....	74
	x	“	“	43, 74, 5
	*	“	spinel, pyroxene.....	74, 149, 194
	.....	“ .....	“ .....	43, 74
	.....	“ .....	“ .....	43, 74
	.....	“ .....	“ .....	43, 74
169	.....	in gneiss.....	tourmalin.....	35
	x	“ syenite.....	.....	35
	.....	“ gneiss.....	molybdenite.....	35
	.....	“ .....	tourmalin.....	35
	.....	“ .....	“ pyroxene.....	35
	.....	“ .....	“ titanite.....	35, 95
	x	“	“	5, 43
	x	“	“	43
	.....	“ .....	pyroxene.....	5, 43
	x	“	“	43
	.....	“ .....	“ wernerite.....	43, 10

ORANGE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Highlands (continued)		
170	West Point, Constitution island.	molybdenite	
		magnetite	
	Monroe		
171	O'Neil mine 1m. e. Mombasha.	magnetite	large grains.
	2m. s.w. Turners.	garnet.	colophonite.
		pyroxene.	large, greenish black crystals.
		"	coccolite, green.
		amphibole.	hornblende, amianthus.
		serpentine.	yellow and black.
		dimagnetite.	perhaps a magnetic pseudomorph after ilvaite.
		biotite.	
		hortonolite.	
172	Clove mine near Turners.	biotite.	
		amphibole.	hornblende, asbestos.
		orthoclase.	
		serpentine.	
		hydrophite.	jenkinsite.
		calcite.	
		chromite.	
	Mt Hope		
173	Erie mine, Guymard.	galena.	
	Tuxedo		
174	Tuxedo Park.	epidote.	
175	1/2 m. e. Arden.	pyroxene.	green, grayish green and gray crystals.
		biotite.	anomite.
		chondrodite.	light yellow grains.
		spinel.	black and green.
		wernerite.	meionite.
		amphibole.	hornblende.
176	3m. s.e. Arden.	pyroxene.	salite, coccolite.
177	Greenwood furnace, Arden.	"	diopsid.
		chondrodite.	
		biotite.	anomite.
		spinel.	

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
170		in gneiss.....		35
		"		35
171	x*†.....	"	serpentine, pyroxene	149
	x.....	"	"	5, 43, 74, 149
		"	magnetite, garnet.....	5, 74
		"	"	5, 74, 149
		"	"	5, 43, 74
		"	"	5, 43, 74
		"	"	43, 181
	xx	"	"	43
		"	on pyroxene.....	139
172		in limestone.....	serpentine, amphibole etc....	5
		"	biotite.....	5, 43
		"		5
		"		5
		"		191
		"		5
		"		5
173	*†.....	in limestone.....		5
174	x.....			5, 43
175	xx.....	in crystalline limestone	mica.....	5, 43
	xx.....	"	pyroxene	5
	x.....	"	spinel	5, 43
	x.....	"	chondrodite...	5, 43
	x.....	"	pyroxene, mica.....	5, 43
		"	"	5, 43
176		"		5, 43
177	xx.....	in gneiss.....	wernerite, spinel.....	51, 43
	x.....	"	spinel	43
	xx.....	"	wernerite, pyroxene.....	43
	x.....	"	"	43

ORANGE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Tuxedo (continued)		
	Greenwood furnace, Arden	wernerite.....	
		amphibole.....	
		ilmenite.....	
	Warwick		
178	1 m. s.w. Amity.....	spinel.....	green, black, brown and red very large crystals.....
		chondrodite....	rounded grains and crystals.....
		corundum.....	white, blue and reddish crystals...
		tourmalin.....	yellow and cinnamon crystals....
		clinochlore....	leuchtenbergite.....
		phlogopite.....	
		fluorite.....	
		amphibole.....	large and perfect crystals.....
		magnetite.....	in scattered grains.....
		ilmenite.....	interesting crystals.....
		garnet.....	grossularite.....
179	1 m. s.e. Amity	spinel.....	large octahedral crystals.....
		corundum.....	bluish white.....
		amphibole.....	hornblende.....
180	Amity.....	spinel.....	grayish red, twinned octahedrons..
		warwickite.....	
		seybertite.....	clintonite.....
		talc.....	common and foliated varieties....
		ilmenite.....	fine crystals.....
		garnet.....	cinnamon brown crystallized and massive.....
		wernerite.....	milk white crystals, dendritic surfaces.....
		pyroxene.....	light brown crystals, leucaugite...
		"	augite and coccolite.....
		enstatite.....	bronzite.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
	x.....	in gneiss.....	pyroxene.....	43
	.....	" .....	ilmenite	43
	.....	" .....	amphibole.....	43
178	xx.....	in granular limestone and serpentine....	chondrodite, hematite.....	5, 43, 176
	x.....	"	spinel, tourmalin.....	43
	x.....	"	" rutile.....	5, 43
	x.....	in calcite.....	"	5, 43, 74
	.....	" .....	amphibole, phlogopite.....	43
	.....	" .....	" fluorite.....	43
	.....	" .....	spinel, tourmalin.....	43, 74
	x.....	"	phlogopite, graphite.....	5, 43, 74, 176
	.....	" .....	chondrodite.....	43
	x.....	"	spinel.....	176, 74
	.....	" .....	amphibole etc.....	74
179	x.....	in crystalline limestone.....	corundum.....	74, 176
	.....	" .....	amphibole spinel.....	74, 176
	.....	" .....	spinel, corundum	74, 176
180	xx.....	" and serpentine..	ilmenite	5, 43, 74, 176, 212
	.....	" .....	" .....	43, 178, 190
	x.....	"	"	5, 43, 74
	xx.....	"	" seybertite.....	5, 43
	.....	" .....	spinel.....	5 43, 85
	x.....	in crystalline limestone.....	pyroxene.....	43, 176
	x.....	"	" titanite.....	5, 43, 74, 176
	xx.....	"	calcite, seybertite.....	5, 41, 43, 119, 159
	.....	" .....	wernerite, titanite.....	74, 176
	.....	" .....	spinel, pyroxene	57, 176

ORANGE

NO.	LOCALITY	SPECIES	DESCRIPTION
Warwick (<i>continued</i>)			
	Amity (<i>continued</i>)	amphibole	pargasite, amianthus
		vesuvianite	grayish and yellowish brown crystals, xanthite
		titanite	in small crystals
		zircon	large brown crystals (rare)
		orthoclase	crystallized
		tourmalin	clove brown
		rutile	brown to pale red crystals
		chondrodite	pink
181	2m. s.w. Amity	apatite	fine crystals, emerald and bluish green
		rutile	dark blue terminated prisms
182	2m. s.e. Amity	epidote	rich grass-green crystals
183	2m. w. Amity	rutile	black, gray and reddish brown crystals
184	Edenville	chondrodite	blood-red, orange and buff
		titanite	light brown crystals
		tourmalin	gray, bluish, green and black
		scorodite	small crystals and druses
		arsenopyrite	crystals and massive
		leucopyrite	abundant
		warwickite	hair-brown grains
		ytrocerite	purple
		sphalerite	opaque, black
		vesuvianite	
		quartz	hornstone
185	1m. n. of Edenville	orthoclase	crystallized
		fluorite	
		amphibole	tremolite and hornblende
		vesuvianite	
		tourmalin	
		titanite	
		spinel	
		zircon	red and white
		orpiment	slight traces

[illegible]

NO.	LOCALITY	SPECIES	DESCRIPTION
Warwick (continued)			
186	southern base of Mt Eve 2½ m. n. of Edenville.....	amphibole..... pyroxene..... wernerite..... zircon..... orthoclase..... spinel..... fluorite.....	edenite, dark hair-brown crystals. gray crystals..... chocolate brown crystals..... purple.....
187	1 m. n. w. Edenville.....	pyroxene..... amphibole..... muscovite..... rutile..... chondrodite.....	augite..... dark green, gray or brown crystals six sided and rhombic prisms.....
188	4 m. w. Edenville.....	ilmenite.....	.....
189	1 m. e. Edenville.....	rutile.....	.....
190	1 m. s. Edenville.....	amphibole.....	dark green, gray or brown crystals
191	Warwick.....	spinel..... serpentine..... ilmenite..... pyroxene..... amphibole..... warwickite.....	soft, pseudomorphous crystals.... sometimes in large pseudomor- phous crystals..... crystals..... coccolite.....
192	Rocky hill 3 m. s.e. Warwick.....	magnetite..... marcasite..... titanite..... zircon..... rutile..... wernerite..... orthoclase..... tourmalin..... seybertite.....	..... terminated crystals..... large grayish brown crystals..... brown..... square terminated prisms..... interesting crystals..... clintonite.....
193	2 m. e. Warwick.....	magnetite..... marcasite..... arsenopyrite..... pyrite..... molybdenite.....	..... ..... ..... in cubes..... in irregular plates.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
186	xx. . . .	in crystalline limestone	wernerite, pyroxene	5, 43, 176
	x	"	" zircon	5, 43, 176
	. . . . .	" . . . . .	pyroxene	5, 43, 176
	x	"	" wernerite	5, 43, 176
	. . . . .	" . . . . .	. . . . .	5, 43
	. . . . .	" . . . . .	. . . . .	176
	. . . . .	" . . . . .	. . . . .	176
187	x	"	amphibole	5, 43
	x	"	pyroxene mica	5, 43, 74, 176
	. . . . .	" . . . . .	" . . . . .	5, 43, 176
	. . . . .	" . . . . .	" . . . . .	5, 43, 176
	. . . . .	" . . . . .	. . . . .	74, 141
188	. . . . .	gneiss limestone contact	spinel chondrodite	5, 43
189	. . . . .	in limestone boulders	amphibole	5, 43
190	. . . . .	" crystalline limestone	titanite chondrodite	5, 43
191	xx	"	serpentine	5, 43
	xx	"	pyroxene spinel	5, 43
	. . . . .	" . . . . .	spinel, chondrodite	5, 43
	. . . . .	" . . . . .	amphibole, spinel	5, 43
	. . . . .	" . . . . .	pyroxene, spinel	5, 43
	. . . . .	" . . . . .	" . . . . .	178, 190, a
192	*†	in gneiss . . . . .	. . . . .	194
	. . . . .	" . . . . .	magnetite	176
	. . . . .	" . . . . .	zircon etc.	5, 43
	. . . . .	" . . . . .	orthoclase, tourmalin	43, 176
	. . . . .	" . . . . .	zircon	176
	. . . . .	" . . . . .	" amphibole	5, 43
	xx	"	tourmalin zircon	5, 43
	. . . . .	" . . . . .	orthoclase	43
	x	"	"	43
193	*†	in limestone	garnet	74, 176
	. . . . .	" . . . . .	zircon	5, 43
	. . . . .	" . . . . .	mica, pyrite	43
	. . . . .	" . . . . .	marcasite	5
	. . . . .	" . . . . .	rutile, zircon, pyrite	5, 43

ORANGE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Warwick (continued)		
	2 m. e. Warwick.....	rutile.....	octagonal prisms.....
		quartz.....	small ferruginous crystals.....
		garnet.....	.....
194	Sterling mines, Sterling lake.....	magnetite.....	granular.....
		amphibole.....	crystals.....
		pyroxene.....	'.....
		epidote.....	small crystals.....
		orthoclase.....	red and white.....
		tourmalin.....	.....
	Woodbury		
195	Queensbury forge 2½ m. s. w. Fort Montgomery.....	spinel.....	black and green.....
		sillimanite.....	monrolite, bucholzite.....
		garnet.....	colophanite.....
		rastolite.....	.....
		amphibole.....	.....
		ilmenite.....	good crystals.....
		pyrrhotite.....	.....
		pyrite.....	massive.....
196	Bradley mine n. Cedar pond.....	magnetite.....	crystals embedded in calcite.....
		pyrrhotite.....	.....
		apatite.....	crystals embedded in calcite.....
		pyroxene.....	granular and short green crystals..
		titanite.....	crystals embedded in calcite.....
197	Fall hill 3 m. e. Central Valley.....	wernerite.....	white and bluish.....
198	Twin lakes (Two ponds).....	pyroxene.....	gray to brown prismatic crystals..
		wernerite.....	large reddish white crystals.....
		chondrodite.....	granular, light yellow.....
		zircon.....	large crystals.....
		amphibole.....	green actinolite and hornblende..
		titanite.....	abundant in large crystals.....
		apatite.....	.....

ORLEANS

The rocks of this county afford no recorded mineral

OSWEGO

The rocks of this county have been successfully drilled

OTSEGO

The rocks of this county afford no recorded mineral

COUNTY (*continued*)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
	x.....	in limestone	zircon.....	5, 43
	.....	“ .....	.....	5, 43
	.....	“ .....	.....	74
194 *	.....	in gneiss.....	apatite.....	149, 194
	.....	“ .....	pyroxene.....	160
	.....	“ .....	epidote.....	160
	.....	“ .....	pyroxene.....	160
	.....	“ .....	magnetite, tourmalin	160
	.....	“ .....	quartz.....	160
195	x.....	“	mica, garnet, magnetite....	5, 43
	.....	“ .....	“ .....	5, 43
	x.....	“	mica, spinel etc.....	5, 43
	.....	“ .....	.....	43
	.....	in serpentine and white limestone.....	.....	43
	.....	“ .....	spinel, chondrodite, rutile...	5, 43
	x.....	“ .....	.....	43
	.....	“ .....	.....	5, 43
196 *	.....	in gneiss.....	calcite.....	160
	.....	“ .....	.....	160
	.....	vein in gneiss.....	calcite, augite.....	160
	.....	“ .....	apatite, titanite etc.....	160
	.....	“ .....	pyroxene, apatite.....	160
197	.....	in gneiss.....	lamellar pyroxene.....	5, 43
198	xx.....	in crystalline limestone.....	wernerite, zircon etc.....	5, 43
	xx.....	“	pyroxene, titanite.....	5, 43
	x.....	“	spinel.....	5, 43
	x.....	“	wernerite, pyroxene.....	5, 43
	.....	“ .....	“ .....	5, 43
	.....	“ .....	“ .....	5, 43
	.....	“ .....	“ .....	5, 43

COUNTY

localities of sufficient importance to note in this list.

COUNTY

for natural gas; no notable mineral localities are recorded.

COUNTY

localities of sufficient importance to note in this list.

NO.	LOCALITY	SPECIES	DESCRIPTION
Carmel			
199	near Carmel, boulder in road.....	epidote.....	sharp, well defined crystals.....
200	2m. s. Carmel.....	".....	translucent crystals and massive..
201	Mahopac group of mines.....	magnetite.....	medium fine grained.....
Kent			
202	2m. n.e. Carmel.....	amphibole.....	actinolite.....
203	Brown's quarry 4m. n.w. Carmel.....	arsenopyrite.....	in good crystals.....
		amphibole.....	radiated anthophyllite.....
Patterson			
204	1m. w. Towners.....	pyroxene.....	grayish white crystals.....
		calcite.....	scalenohedral crystals.....
		amphibole.....	asbestos and tremolite.....
		dolomite.....	.....
		pyrite.....	massive.....
Philipstown			
205	Cold Spring.....	titanite.....	.....
		epidote.....	.....
		pyroxene.....	.....
206	Hustis quarry 4m. n.e. Cold Spring...	amphibole.....	tremolite, amianthus.....
		serpentine.....	many varieties.....
		titanite.....	.....
		pyroxene.....	diopsid, green coccolite.....
		wernerite.....	small white opaque crystals.....
		dolomite.....	semiopaline, conchoidal fracture...
		serpentine.....	.....
207	Cotton rock 3½m. s. of Garrisons (this locality has been obliterated by the N.Y.C.R.R. embankment)	amphibole.....	silky amianthus.....
		pyroxene.....	diallage and augite.....
		stilbite.....	crystals and fanlike groups.....
		laumontite.....	occurs sparingly.....
Putnam Valley			
208	Denny and Todd mines 6m. n.e. Peekskill	magnetite.....	.....
		chromite.....	.....
		calcite.....	small crystals on magnetite.....
209	Phillips' ore bed (this bed outcrops at intervals in the towns of Philips- town and Putnam Valley following a valley formerly known as Cano- pus hollow).....	magnetite.....	.....
		pyrite.....	massive.....
		amphibole.....	actinolite.....
		opal.....	hyalite in thin coatings.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
199	x	in granite boulder		e
200		in gneiss	amphibole, garnet	5, 43
201	*†	"		149, 194
202		in gneiss		5
203		"	amphibole	43
		serpentine in gneiss	arsenopyrite, epidote	5, 43
204	xx	in dolomitic limestone		5, 43
	x	"	asbestos	43
	x	"	calcite	5, 43
		"	"	43
		"		5, 43
205	†	in gneiss		5, 43
		"		5, 43
		"		5, 159
206	*†	in crystalline limestone	serpentine	5, 43, g
	x*†	"		5, g
		"		43, g
		"	serpentine, apatite	5, 159
		"	titanite, apatite, quartz	5, 43, g
	*†	"		5, 43
207	†	"	amphibole	5, 43
	†	"	serpentine	5, 43
	†	"	"	5, 43
	†	"		5, 43
	†	"		5, 43
208	*†	gneiss limestone contact	chromite	43, 149, 194
		"		43
		"	magnetite chromite	5, 43
209	*†	in gneiss		5, 43, 194
		"	magnetite, amphibole	5, 43
		"	"	5, 43
		on "		43

PUTNAM

NO.	LOCALITY	SPECIES	DESCRIPTION
	Southeast		
210	Tilly Foster mine 2m. n.w. Brewster...	chondrodite....	deep red crystals, highly modified
		clinohumite....	"
		humite.....	"
		magnetite.....	dodecahedral crystals and massive
		dolomite.....	.....
		serpentine	light and dark green, mottled with red.....
		"	pseudomorphs in many forms.....
		brucite.....	crystallized and pseudomorph after dolomite.....
		enstatite.....	.....
		clinochlore.....	in large crystals.....
		prochlorite....	.....
		biotite.....	.....
		amphibole.....	actinolite, light green fibrous
		pyrrhotite .....	.....
		fluorite.....	colorless to purple crystals
		albite .....	.....
		epidote.....	small crystals.....
		titanite.....	transparent greenish crystals often twinned
		hydrotalcite....	white fibrous.....
		calcite.....	scalenohedral and nail head types.
		garnet.....	oil-green dodecahedral crystals.
		apatite.....	.....
		datolite.....	.....
		stilbite.....	.....
		prehnite.....	.....
		apophyllite .....	.....
		tourmalin.....	.....
		molybdenite....	.....
		pyroxene.....	dark green coccolite.....

QUEENS

The rocks of this county are deeply covered with drift and artificially

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
210	xx.....	in gneiss.....	magnetite, clinocllore.....	1, 16, 37, 38, 43, 141, 170
	x.....	".....	".....	43, 141
	x.....	".....	".....	43, 141
	x*†.....	".....	serpentine, clinocllore.....	43, 149, 170, 194
	x.....	".....	magnetite, chondrodite.....	43, 170
	x.....	".....	".....	16, 43, 170
	x.....	".....	".....	42, 43
	x.....	".....	prochlorite.....	42, 43, 170
	x.....	".....	".....	16, 43, 170
	xx.....	".....	chondrodite.....	16, 43, 170
		".....	clinocllore.....	16, 43, 170
		".....		16, 43
		".....		5, 16, 43
		".....		43, 170
		".....	calcite.....	43, 170
		".....		43
		".....	pyroxene, amphibole.....	43, 170
	xx.....	".....	magnetite, apatite.....	43
	x.....	".....	" prochlorite.....	w
		".....	brucite, dolomite.....	170
		".....		43, 170
	x.....	".....		43
		".....		43
		".....		43
		".....		43
	x.....	".....		43
		".....		43, w
		".....	magnetite serpentine.....	w
		".....	hornblende, epidote.....	w

COUNTY

made land; deep excavations may however develop mineral localities.

RENSSELAER

NO.	LOCALITY	SPECIES	DESCRIPTION
Brunswick			
211	Lansingburg.....	quartz.....	large doubly terminated crystals..
212	South Troy.....	"	"
RICHMOND COUNTY			
213	Tompkinsville ^a and southward to New Dorp.....	serpentine ^b "	red and green (slickensides)..... asbestos and amianthus.....
		talc.....	greenish white, foliated.....
		dolomite.....	.....
		brucite.....	white, foliated.....
		magnesite.....	massive in veins and cavities....
		aragonite.....	minute needlelike crystals.....
		chromite.....	minute octahedrons.....
		pyrolusite.....	thin dendrites.....
		deweylite.....	.....
		anhydrite.....	massive.....
214	iron mines w. of Concord and w. of Garretsons.....	limonite.....	oolitic and spongy.....
		quartz.....	green quartz in small crystals.....
215	Rossville on shore of Arthur kill.....	lignite.....	.....
		pyrite.....	crystals and nodules.....
ROCKLAND			
Haverstraw			
216	Ladentown 1½ m. n.w. of Pomona.....	cuprite.....	.....
		malachite.....	.....
		zircon.....	brilliant brown to black crystals...
217	Haverstraw.....	amphibole.....	hornblende in small crystals.....
Orangetown			
218	Piermont, excavations for the Erie R. R.....	datolite.....	.....
		stilbite.....	in minute crystals.....
		apophyllite.....	.....
		pectolite.....	.....
		prehnite.....	.....

^aA fresh exposure occurs in Westervelt av. between 1st and 2d av.^bSerpentine also occurs in frequent outcrops along the ridge extending southwest from

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
211	x			e
212				e

AND BOROUGH

213		serpentine rock	talc, brucite etc	5, 43, 94
x		"	"	5,43,94,144
x		"	serpentine, magnesite	5, 43
x		"	"	5, 43
		"	"	5, 43
		"	serpentine, brucite	5, 43
		"	"	43
		"	serpentine	w
		"	on talc	w
		"	serpentine, brucite	w
		"	talc, brucite	w
214	*†	serpentine	yellow clay and quartz	18, 23, 67 149
		"	limonite	67
215		in clay	pyrite	5, 43
		"	lignite	5, 43

COUNTY

216		in red Triassic shale	malachite	5, 43
		"	cuprite	43
		in granite boulder		5, 43
217		" shale		5
218		in diabase	apophyllite, stilbite	43
		"	datolite, zeolites	5, 43
		"	"	5, 43
		"	"	5, 43
		"	calcite	5, 43

ROCKLAND

NO.	LOCALITY	SPECIES	DESCRIPTION
	Orangetown (continued)		
	Piermont, excavations for the Erie R. R. (continued).....	thomsonite.....	
		chabazite.....	
		calcite.....	in minute crystals.....
		tourmalin.....	
	Stony Point		
219	Dunderberg mine n. side Dunderb'g mt	magnetite.....	lean ore.....
220	Stony Point, north shore.....	zoisite.....	
		pyroxene.....	green augite.....
		amphibole.....	hornblende, light green.....
		titanite.....	
		pyrite.....	small crystals.....
		chrysolite.....	
		garnet.....	
		staurolite.....	minute crystals.....
221	Tomkins Cove.....	calcite.....	white and yellowish crystals.....
		barite.....	minute tabular crystals.....
222	2½ m. n.w. Grassy Point.....	amphibole.....	radiated and interlaced actinolite..
		orthoclase.....	minute crystals.....
		epidote.....	small granular masses.....
	Canton		
223	Pyrite mines 2m. s. Canton	pyrite.....	massive
		chalcopyrite	
		hematite	
		calcite.....	
		serpentine	
		talc.....	rensselaerite.....
		tourmalin.....	brown.....
		titanite	
		pyroxene.....	
	De Kalb		
224	3m. s. DeKalb Junction.....	"	diopsid, transparent crystals
		datolite	rare.....
225	5m. s.w. DeKalb Junc. (Mitchel farm).	pyroxene.....	diopsid.....
		calcite.....	crystallized and massive.....
		quartz	

ST LA WRENCE

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
		in diabase.....	zeolites, calcite.....	5, 43
		“	“	5, 43
		“	“	5, 43
		“ .....	.....	a
219	*†.....	“ gneiss.....	pyrite.....	194
220	.....	“ diorite limestone contact.....	amphibole, pyroxene.....	5, 45, 228
		“	“	45, 96, 159, 228
		“	pyroxene.....	5, 45, 96, 228
		“	amphibole wernerite.....	159, 228
		on peridotite.....	calcite	e
		in “ .....	.....	96, 44
		“ diorite.....	.....	44
		“ mica schist.....	.....	44
221	x.....	“ Stockbridge limestone.....	.....	5, 43
		“	calcite	5
222	.....	in limestone.....	epidote etc.....	5
		“	amphibole, epidote.....	5
		“	orthoclase “	5

COUNTY

223	x*.....	gneiss limestone contact.....	chalcopyrite	43
		“	pyrite.....	43
		“ .....	.....	43
	x.....	“ .....	.....	43
		in granular limestone.....	.....	43
		“ .....	.....	43
		“ .....	.....	43
		“ .....	.....	43
		“ .....	.....	43
224	xx.....	gneiss limestone contact	pockets in clay	5, 43, 151
		“	pyroxene.....	43
225	xx.....	in clay pockets in talc	calcite.....	5, 43, 151, w
		“	pyroxene quartz.....	w
		“ .....	.....	w

ST LAWRENCE

NO.	LOCALITY	SPECIES	DESCRIPTION
De Kalb (continued)			
226	3m. w. De Kalb Junction.....	talc.....	massive fibrous.....
		tourmalin.....	colorless glassy crystals.....
		amphibole.....	dark green hornblende.....
		phlogopite.....	.....
		serpentine.....	.....
227	near Osborn's lake.....	fluorite.....	large cubic crystals.....
		tourmalin.....	.....
		calcite.....	crystals.....
		barite.....	.....
		amphibole.....	white and gray tremolite.....
		phlogopite.....	.....
228	Richville.....	barite.....	long tabular crystals.....
Edwards			
229	Talcville, talc mines.....	talc.....	massive, fibrous.....
		amphibole.....	hexagonite schist of interlaced crystals.....
		pyrolusite.....	small but perfect dendrites.....
		enstatite.....	rather rare.....
230	Anthony mine 2m. s. Edwards.....	amphibole.....	actinolite, tremolite.....
		wernerite.....	.....
		apatite.....	.....
		phlogopite.....	light green and sea-green plates...
		hematite.....	.....
		magnetite.....	.....
		serpentine.....	.....
Fine			
231	Scott farm.....	oligoclase.....	crystals, moonstone.....
		pyroxene.....	brilliant crystals.....
		zircon.....	.....
		titanite.....	.....
		fluorite.....	.....
		calcite.....	.....
		pyrite.....	.....
232	Benson mines.....	magnetite.....	.....
233	Clifton mines.....	".....	.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
226	*	in limestone	amphibole	w
	xx	"	" pyroxene	43
	x	"	pyroxene	43,
	x	"	" amphibole	43
		"		43
227	x	in gneiss	calcite	43
	x	"	" fluorite	43
		"	fluorite	43
		"	calcite, fluorite	43
		"	phlogopite	5, 43
		"	amphibole etc.	43
228	xx	in limestone		24, 43
229	*	in gneiss		136, 137, 171, 172, 200, 202, 203, 205
	xx	in gneiss	amphibole	43, 205
	x	on talc		w
		in limestone	amphibole	43, 205
230	xx	gneiss limestone contact	apatite, wernerite	43
		"	" amphibole etc.	43
		"	"	43
	xx	"	wernerite, apatite	c
		"		43
		"		43
		"		5, 43
231	x	granite limestone contact	pyroxene	43, c
	x	"	oligoclase	43, c
	x	"	titanite	43
		"	zircon, apatite	43
	x	in limestone	calcite, pyrite	43
	x	"	fluorite	43
		"	" calcite	43
232	*†	in gneiss		149, 194
233	*†	"		194

ST LAWRENCE

NO.	LOCALITY	SPECIES	DESCRIPTION
Fowler			
234	Fullerville iron works.....	hematite.....	
		quartz.....	pyramidal crystals.....
		barite.....	tabular crystals.....
235	Belmont farm.....	sphalerite.....	
		galena.....	
Gouverneur			
236	4½ m. n. of Gouverneur.....	tourmalin.....	brown crystals highly modified....
		amphibole.....	short green crystals, also tremolite
		pyroxene.....	
		apatite.....	large crystals.....
		titanite.....	brilliant black crystals.....
		phlogopite.....	large sheets dark brown.....
		pyrite.....	crystallized.....
237	1 m. s.w. of Gouver. (marble quarries) ..	tourmalin.....	plentiful brown crystals.....
		amphibole.....	tremolite.....
		wernerite.....	
		serpentine.....	pseudomorphs and verd antique...
		fluorite.....	etched and twinned cubes.....
238	1½ m. n.e. of Gouverneur.....	garnet.....	almandite.....
239	1 m. s. of Gouverneur.....	orthoclase.....	large crystals.....
		pyroxene.....	gray and dark green.....
		apatite.....	
		vesuvianite.....	
		titanite.....	
		talc.....	rensselaerite.....
		serpentine.....	
		fluorite.....	
240	Elmdale (Smith Mills), 4½ m. w. Gouverneur.....	amphibole.....	massive fibrous tremolite.....
		vesuvianite.....	
		biotite.....	
		graphite.....	
		barite.....	crystalline.....
Hammond			
241	near De Long's mills.....	apatite.....	large crystals.....
		zircon.....	large crystals containing nucleus ..
		orthoclase.....	luxoclase, white to bluish crystals ..

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
234	.....	limestone gneiss contact.....	quartz.....	43
	x.....	".....	hematite.....	5, 43
	.....	".....	".....	43
235	.....	vein traversing serpentine.....	galena.....	5, 43
	.....	".....	sphalerite.....	43
236	xx.....	in Grenville limestone.....	amphibole, apatite.....	5, 43
	xx.....	".....	apatite, tourmalin.....	5, 43
	x.....	".....	".....	5, 43
	x.....	".....	wernerite, titanite.....	5, 43, 80
	x.....	".....	tourmalin, pyroxene.....	5, 43
	x.....	".....	".....	c
	.....	".....	tourmalin, calcite.....	
237	xx.....	".....	calcite.....	5, 43, 25
	xx.....	".....	".....	5, 43
	xx.....	".....	".....	5, 43
	xx.....	".....	calcite.....	5, 43
	x.....	".....	".....	43, c
238	*.....	vein in gneiss.....	quartz.....	10
239	.....	limestone granite contact.....	" pyroxene.....	5, 43
	x.....	".....	amphibole, tourmalin.....	5, 43, 159
	.....	".....	pyroxene, titanite.....	43
	.....	".....	".....	43, 79
	.....	".....	apatite, pyroxene.....	43
	x.....	in limestone.....	serpentine.....	43
	.....	".....	talc.....	5, 43
	.....	".....	".....	43
240	xx.....	gneiss limestone contact.....	biotite, graphite.....	43, 79
	.....	".....	".....	43
	.....	".....	".....	43
	.....	".....	".....	43
	.....	in limestone.....	fluorite, calcite.....	79
241	xx.....	in crystalline limestone.....	wernerite, titanite.....	5, 43
	xx.....	".....	apatite.....	5, 43
	x.....	".....	" pyroxene.....	5, 43

ST LAWRENCE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Hammond (<i>continued</i>)		
	near De Long's mills (<i>continued</i>).....	amphibole.....	pargasite and tremolite.....
		phlogopite.....	.....
		pyroxene.....	grayish white and green.....
		barite.....	snow white crested variety.....
		pyrite.....	crystals.....
		fluorite.....	purple.....
	Hermon		
242	Lowden mine 1m. n.e. of Hermon:....	hematite.....	.....
		quartz.....	pyramidal.....
		amphibole.....	pargasite.....
		pyroxene.....	.....
		tourmalin.....	.....
243	Dodge ore bed.....	siderite.....	bent crystals.....
		serpentine.....	.....
		limonite.....	bog iron ore.....
	Macomb		
244	1½ m. n. Elmdale (Smiths Mills).....	fluorite.....	masses of large green cubes.....
		calcite.....	Rossie type, small crystals.....
		pyrite.....	concretionary aggregates of crystals.....
245	St Lawrence Min. Co.'s mines, 1m. e. Macomb	galena.....	massive.....
		sphalerite.....	.....
246	1m. n.e. Macomb.....	tourmalin.....	dark brown and black.....
		pyroxene.....	small glassy crystals.....
		amphibole.....	.....
		albite.....	peristerite.....
		graphite.....	.....
		phlogopite.....	.....
		wernerite.....	.....
		apatite.....	.....
247	Ingram farm.....	tourmalin.....	dark brown and black.....
		graphite.....	.....
248	Pope's Mills.....	phlogopite.....	.....
		barite.....	.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
	x.....	in crystalline limestone.....	apatite, pyroxene.....	43
	x.....	“.....	“.....	43
	.....	“.....	zircon, orthoclase.....	5, 159
	.....	“.....	pyrite.....	43
	.....	“.....	.....	43
	.....	“.....	.....	43
242 *	.....	in gneiss.....	.....	194
	x.....	“.....	hematite.....	5, 43
	.....	“.....	.....	43
	.....	“.....	.....	43
	.....	“.....	.....	43
243	.....	in limestone.....	.....	5, 43
	.....	“.....	.....	5, 43
	.....	“.....	.....	43
244	xx†.....	in crystalline limestone.....	calcite, pyrite.....	43, 116
	.....	“.....	fluorite “.....	43, w
	.....	in crystalline limestone.....	fluorite, calcite.....	w
245	*†.....	veins in limestone.....	calcite.....	43, w
	*†.....	“.....	galena, calcite.....	43, w
246	xx.....	in crystalline limestone.....	pyroxene, amphibole.....	43
	x.....	“.....	tourmalin “.....	159, c
	.....	“.....	albite, pyroxene.....	43
	x.....	“.....	graphite “.....	43
	x.....	“.....	pyroxene, wernerite.....	43
	x.....	“.....	.....	43
	.....	“.....	.....	43
	.....	“.....	.....	43
247	xx.....	gneiss limestone contact.....	graphite.....	43
	.....	“.....	orthoclase.....	43
248	x.....	“.....	.....	43
	.....	“.....	.....	43

NO.	LOCALITY	SPECIES	DESCRIPTION
Morristown			
249	Mineral point, 2m. n.e. Hammond.....	galena.....	.....
		sphalerite.....	.....
		fluorite.....	.....
		calcite.....	large clear crystals.....
Oswegatchie			
250	Ogdensburg.....	labradorite.....	.....
Pierrepont			
251	1 m.e. West Pierrepont	tourmalin.....	brilliant black crystals.....
		phlogopite.....	.....
		pyroxene.....	transparent, tabular crystals.....
252	farms of Wells and Vaughn.....	amphibole.....	.....
		pyroxene.....	.....
		oligoclase.....	.....
253	Pierrepont.....	wernerite.....	large gray and white crystals.....
		albite.....	peristerite.....
		pyroxene.....	.....
Pitcairn			
254	1 m. n.e. East Pitcairn	zircon.....	fine crystals.....
		microcline.....	white rounded crystals.....
		pyroxene.....	brilliant green crystals.....
		titanite.....	pale red and brown crystals.....
		phlogopite.....	.....
		gypsum.....	satin spar.....
255	2 m. e. East Pitcairn.....	pyroxene.....	large crystals.....
		titanite.....	large pale red and brown crystals..
		fluorite.....	.....
		zircon.....	large, greenish, prismatic crystals.
		calcite.....	.....
Potsdam			
256	boulder in road near Crary's Mills.	orthoclase.....	large crystals
		tourmalin.....	black "
		biotite.....	.....
		amphibole.....	.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
249	.....	vein in gneiss.....	sphalerite, calcite.....	5, 43
	.....	“ .....	galena	5, 43
	.....	“ .....	“ .....	5, 43
	.....	“ .....	“ sphalerite	5
250	.....	in granite boulder.....	.....	43
251	xx	limestone gneiss contact.....	quartz	43
	x	“	“	43
	.....	“ .....	“ amphibole.....	43, 159
252	.....	in gneiss.....	pyroxene, oligoclase.....	43
	.....	“ .....	.....	43
	.....	“ .....	.....	43
253	x	limestone gneiss contact.....	pyroxene.....	43, c
	.....	“ .....	“ wernerite.....	43
	.....	“ .....	wernerite.....	43
254	xx	limestone granite contact.....	microcline	43
	x	“	pyroxene	43
	x	“	microcline, zircon.....	43
	.....	“ .....	“ pyroxene.....	43, 223
	.....	“ .....	.....	43
	.....	“ .....	.....	43
255	x	granite vein.....	titanite, zircon	43
	x	“	zircon.....	43, 223
	x	“	calcite.....	43
	x	“	titanite, pyroxene.....	43
	.....	“ .....	fluorite.....	43
256	x	granite boulder.....	quartz, pyroxene.....	5, 43
	x .....	“ .....	.....	43
	x .....	“ .....	.....	43
	.....	“ .....	.....	43

ST LAWRENCE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Rossie		
257	Rossie lead mines 2m. s. Rossie.....	galena.....	crystallized and massive.....
		pyrite.....	crystals often highly modified.....
		calcite.....	large twinned crystals.....
		celestite.....	delicate blue.....
		chalcopyrite....	crystals.....
		hematite.....	.....
		cerussite.....	rare.....
		anglesite.....	.....
		fluorite.....	rarely in fine octahedral crystals..
258	iron mines, Somerville.....	hematite.....	laminated structure.....
		barite.....	in flattened crystals.....
		pyrite.....	crystals.....
		quartz.....	large implanted crystals.....
259	Somerville.....	spinel.....	rose and reddish brown.....
		hydrotalcite....	houghite.....
		dolomite.....	.....
		aragonite.....	flos ferri.....
		phlogopite.....	in large plates.....
		wernerite.....	.....
260	1/2 m. n.w. Somerville.....	chondrodite....	yellow grains.....
		spinel.....	rose and reddish brown.....
		hydrotalcite....	houghite.....
261	3m. n. Oxbow (Yellow lake).....	chondrodite....	yellow grains.....
		orthoclase.....	.....
		amphibole.....	bright green pargasite.....
		apatite.....	small, transparent, green crystals.
		pyroxene.....	.....
		titanite.....	.....
		zircon.....	.....
		wernerite.....	large, light yellowish green crystals
		phlogopite.....	in large sheets.....
		gahnite.....	automolite.....
		fluorite.....	.....
		dolomite.....	.....
		graphite.....	.....
262	near Grasse lake.....	pyroxene.....	hemihedral crystals.....
		wernerite.....	greenish.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
257	x*†	vein in limestone.....	calcite, pyrite.....	5, 43, 211
	xx†	"	galena, calcite.....	5, 9, 43
	xx†	"	" sphalerite.....	5, 9, 43.
	x†	"	calcite.....	43
		"	galena, sphalerite.....	5, 43
		"		43
		"	galena.....	43
		"		5, 43
		"	calcite.....	5, 43
258	*	synclinal fold of Potsdam sandstone.....		194
	x	in limestone vein.....	quartz dolomite.....	43
	x	" green shale.....	"	5, 43
	x			5, 43
259		in limestone and serpentine.....	chondrodite.....	5, 43
		"	serpentine.....	43, 93, 180 ^a
			"	43
			dolomite etc.....	80
	x			43
				5, 43
260	x	in limestone.....	spinel.....	5, 43
		"	chondrodite.....	43
	x	"	spinel.....	93, 180 ^a
261		limestone gneiss contact.....		43
	xx	"		43
	xx	"	pyroxene, orthoclase.....	5, 43, w
	x	"	"	43, w
	x	"	wernerite, orthoclase.....	43
		"	"	43
		"		43
	xx	"	quartz, titanite etc.....	43, w
	x	"	"	43, w
		in limestone.....	dolomite.....	43
		"	"	43
		"		43
		"		43
262	xx	limestone gneiss contact.....	wernerite, titanite.....	43, 159, 229 ^a
	x	"	pyroxene, graphite etc.....	43

ST LAWRENCE

NO.	LOCALITY	SPECIES	DESCRIPTION
	Rossie (continued)		
	near Grasse lake (continued).....	graphite.....	fine crystals.....
		orthoclase.....	luxoclase.....
		titanite.....	pale red and brown crystals.....
	Webster farm.....	apatite.....	large crystals.....
	".....	zircon.....	.....
		amphibole.....	tremolite in short crystals.....
263	2m. n. Rossie.....	wernerite.....	greenish.....
		pyroxene.....	large green crystals.....
		titanite.....	brown crystals.....
		tourmalin.....	.....
		phlogopite.....	.....
	Russell		
264	Buskurk farm, 1m. n.e. Russell (?)...	danburite.....	abundant fine crystals.....
		datolite.....	rare.....
		wernerite.....	.....
		pyroxene.....	small green crystals.....
		tourmalin.....	black.....
		amphibole.....	.....
		phlogopite.....	.....
		albite.....	.....
		quartz.....	massive and crystallized.....
		calcite.....	.....
265	Moore farm e. Russell.....	pyroxene.....	short, greenish black crystals.....
		amphibole.....	fine, white cryst's doubly termin'ed
		wernerite.....	long white prismatic crystals.....
		phlogopite.....	.....
266	1½m. n.w. North Russell.....	pyroxene.....	fine grayish green crystals.....
		phlogopite.....	large sheets.....
		apatite.....	crystals and massive.....
		calcite.....	pinkish massive.....
		molybdenite...	disseminated.....
		titanite.....	black crystals.....
		labradorite...	grayish brown massive.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
263	xx	limestone gneiss contact	pyroxene, wernerite	5, 43
	xx	"	"	5, 43
	x	"	"	5, 43
		"	orthoclase	w
		"	titanite etc.	w
		"		43
	x	"	pyroxene	43
	x	"	orthoclase, apatite	43, 159
	x	"	"	5, 43
	x	"	"	43
264	xx	cavities and seams in gneiss	pyroxene	22, 43, 219
		"	"	43
		gneiss limestone contact	amphibole	43
		"	wernerite, danburite	43
		"	quartz	43
		"	pyroxene	43
		"	wernerite	43
		"	quartz	43
		"	danburite	43
		"		43
265	xx	in gneiss	wernerite, amphibole	43, 159
	xx	"	pyroxene	43
	x	"	pyroxene	43, c
		"	"	43
266	xx	gneiss limestone contact	calcite, titanite	w
	xx	"	pyrite inclusions	w
	x	"	calcite	w
		"	apatite, pyroxene etc.	w
		"	calcite	w
	x	"	pyroxene, labradorite	w
		"	titanite	w

SARATOGA

NO.	LOCALITY	SPECIES	DESCRIPTION
Greenfield			
267	1m. n.w. Highrock spring Saratoga...	chrysoberyl....	pale yellowish green crystals
	in Mt McGregor ridge.....	garnet.....	pink grossularite
		tourmalin.....	black crystals
		muscovite	reddish brown crystals.....
		orthoclase	transparent adularia
		apatite.....	reddish brown crystals.....
		graphite .....	.....

SCHENECTADY

The rocks of this county afford no recorded mineral

SCHOHARIE

Carlisle			
268	2m. w. Central Bridge	calcite.....	crystallized and fibrous.....
		barite.....	fibrous
Esperance			
269	Ball's cave 4m. n. of Schoharie	calcite	crystals and stalactites
Middleburg			
270	4m. w. Schoharie on b'k small stream..	"	geodes lined with crystals.....
271	1½ m. e. of Middleburg.....	"	obtuse rhombohedrons.....
Schoharie			
272	Schoharie e. of courthouse.....	strontianite....	columnar and granular masses ...
		celestite.....	fibrous, blue
		barite.....	" calcareous.....
273	2m. n.e. Schoharie.....	strontianite....	crystals in geodes.....
		barite.....	massive
		calcite.....	"
274	3m. n.e. Schoharie, near Foxes creek ..	aragonite.....	radiating crystals
275	1m. w. of Schoharie	pyrite.....	single and twinned crystals.....
		barite	fibrous
276	Howes Cave	calcite.....	crystals and stalactites
		aragonite.....	slender radiating crystals
		pyrite.....	nodular aggregates
Sharon			
277	Sharon Springs	calcite	calcareous tufa.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
267	xx	in granite, traversing gneiss	quartz, tourmalin, garnet	5, 43, 210
	xx	"	" " mica	5, 43, 210
	xx	"	" garnet etc.	5, 43, 210
	x	"	chrysoberyl	5, 43, 210
	x	"	" tourmalin	5, 43, 210
		"	graphite	5, 43
			apatite	43

COUNTY

localities of sufficient importance to note in this list

COUNTY

268		in Helderberg limestone	barite	43
		"	calcite	43
269		in hydraulic limestone		5, 43
270		in limestone		5
271		" veins in limestone		5
272	xx	thin veins in hydraulic limestone	barite, calcite	5, 43, 63, 177
		"	strontianite calcite	5, 43, 63
		"		43, 63
273		in hydraulic limestone	barite, calcite	43, 63, 177
		"	strontianite calcite	43, 63
		"	pyrite	43, 63
274	x	"		63
275	xx	in blue slate		5, 43, 63
		vein in blue slate		63
276	x	in hydraulic limestone		5, 43
		"	calcite	h
		in shale		w
277		in limestone near springs		5

SCHUYLER

The rocks of this county afford no recorded mineral

SENECA

The rocks of this county afford no recorded mineral

STEUBEN

The rocks of this county afford no recorded mineral

SUFFOLK

The surface rocks of this county consist of glacial drift and afford

SULLIVAN

NO.	LOCALITY	SPECIES	DESCRIPTION
	Mamakating		
278	Wurtzboro, lead mine.....	galena.....	mainly massive.....
		sphalerite.....	.....
		chalcopyrite....	.....
		pyrite.....	.....

TIOGA

The rocks of this county afford no recorded mineral

TOMPKINS

The rocks of this county afford no recorded mineral

ULSTER

	Kingston		
279	Rondout, cement mines.....	calcite.....	flat rhombohedrons, pyrite inclusions.....
		quartz.....	crystals showing phantom of smoky quartz.....
		pyrite.....	cubic.....
		marcasite.....	small crystals.....
	Marbletown		
280	High Falls.....	pyrite.....	pyritohedral crystals.....
	Wawarsing		
281	Ellenville, lead mine.....	galena.....	crystals rare.....
		chalcopyrite....	" well modified.....
		quartz.....	in groups and isolated crystals....
		sphalerite.....	massive black.....
		brookite.....	small, brilliant crystals.....
		pyrite.....	.....

COUNTY

localities of sufficient importance to note in this list.

COUNTY

localities of sufficient importance to note in this list.

COUNTY

localities of sufficient importance to note in this list.

COUNTY

no mineral localities of sufficient importance to note in this list.

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
278	*†	in quartzite.....	sphalerite, chalcopyrite...	5, 43
		"	galena.....	5, 43
		"	" sphalerite.....	5, 43
		"	" "	5, 43

COUNTY

localities of sufficient importance to note in this list.

COUNTY

localities of sufficient importance to note in this list.

COUNTY

279	x	in Helderberg limestone.....	quartz.....	<i>h, p</i>
	xx	"	calcite.....	<i>p</i>
		"	"	<i>p</i>
	x	"	"	<i>h, w</i>
280		in Helderberg limestone.....		5
281	*	vein in quartzite.....	chalcopyrite, sphalerite....	5, 43
	xx	"	quartz "	5, 43
	xx	"	chalcopyrite.....	5, 43
		"	galena, chalcopyrite.....	5, 43
	x	"	quartz.....	43
		"	chalcopyrite.....	43

WARREN

NO.	LOCALITY	SPECIES	DESCRIPTION
Caldwell			
282	Diamond island, Lake George	quartz.....	similar to Herkimer county.....
		calcite.....	white to yellow nail head crystals..
		dolomite.....	.....
Chester			
283	e. Loon lake.....	pyrite.....	crystallized.....
		chalcopyrite...	imperfect crystals.....
		rutile.....	.....
		tourmalin.....	.....
Hague			
284	Sabbath Day Point.....	epidote.....	common massive.....
		wernerite.....	.....
		titanite.....	.....
285	Graphite 4m. w. Hague.....	graphite.....	leafy masses.....
		apatite.....	small crystals.....
		garnet.....	large red crystals.....
Johnsburg			
286	Moore's mine, Gore mountain.....	garnet.....	massive.....
		pyroxene.....	coccolite.....
287	North River Garnet Co.'s m., Oven mt.	garnet.....	massive.....
		pyroxene.....	coccolite.....
Queensbury			
288	Glens Falls.....	calcite.....	crystals of lenticular form.....
		dolomite.....	well defined crystals.....
Thurman			
289	Thurman.....	fluorite.....	.....
		zircon.....	large and interesting crystals....
		graphite.....	irregular shaped masses.....
		serpentine.....	yellowish green.....
		pyrite.....	fine crystals.....
		garnet.....	almondite.....
Warrensburg			
290	Warrensburg iron mine.....	magnetite.....	.....

WASHINGTON

Fort Ann			
291	1m. n. Fort Ann.....	graphite.....	.....
		pyroxene.....	.....
		quartz.....	.....
292	Shelving Rock.....	serpentine.....	yellowish green, translucent.....

COUNTY

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
282	x.....	Beekmantown limestone.....	calcite.....	5, 43
	x.....	“.....	quartz.....	43
	.....	“.....	“.....	5
283	x.....	crystalline limestone.....	tourmalin, rutile.....	5, 43
	.....	“.....	“.....	43
	.....	“.....	.....	5, 43
	.....	“.....	.....	5, 43
284	.....	in gneiss.....	.....	5
	.....	“.....	titanite.....	<i>f</i>
	.....	“.....	wernerite.....	<i>f</i>
285	*.....	quartzite and limestone.....	quartz.....	111
	.....	“.....	zircon.....	111
	.....	in gneiss.....	sillimanite.....	111
286	*.....	in hornblende schist.....	pyroxene.....	112, <i>e</i>
	.....	“.....	garnet.....	<i>w</i>
287	*.....	“.....	pyroxene.....	112, <i>e</i>
	.....	“.....	garnet.....	<i>w</i>
288	.....	in Trenton limestone.....	dolomite.....	5
	.....	“.....	calcite.....	5, 43
289	xx.....	crystalline limestone.....	pyrite etc.....	5, 43
	xx.....	in quartz vein.....	graphite.....	5, 9, 43
	x.....	“.....	zircon, garnet.....	5
	x.....	crystalline limestone.....	.....	5, 43, 132
	x.....	“.....	.....	5, 43
	.....	in quartz vein.....	.....	<i>e</i>
290	*†.....	.....	.....	194

COUNTY

291	x.....	gneiss limestone contact.....	pyroxene, quartz.....	5, 43
	.....	“.....	quartz.....	5
	.....	“.....	graphite.....	5
292	x.....	crystalline limestone.....	.....	5

WASHINGTON

NO.	LOCALITY	SPECIES	DESCRIPTION
Granville			
293		pyroxene.....	lamellar.....
		orthoclase.....	massive.....
		epidote.....	
294	Middle Granville.....	pyrolusite.....	dendrites.....
Putnam			
295	Anthony's Nose.....	hematite.....	mammillary, botryoidal.....

WAYNE

Wolcott			
296	Wolcott mine.....	hematite.....	fossil ore.....
		barite.....	pinkish crystals, highly modified..
297	Ontario mines.....	hematite.....	oolitic ore.....

WESTCHESTER

Cortlandt			
298	Anthony's nose 4m. n.w. Peekskill on northern side of mountain.....	pyrrhotite.....	massive.....
		chalcopyrite....	"
		magnetite.....	sparingly disseminated.....
		pyroxene.....	
		amphibole.....	
		apatite.....	small green crystals.....
		calcite.....	tabular crystals coated with quartz
299	Crugers.....	pyroxene.....	white.....
		amphibole.....	
		staurolite.....	minute crystals.....
		cyanite.....	
		sillimanite.....	fibrolite.....
300	emery mines between Crugers and Peekskill.....	corundum.....	emery, intimately mixed with magnetite
		magnetite.....	intimately mixed with emery.....
		spinel.....	hercynite.....
		garnet.....	small rounded crystals.....
301	south side of Verplanck Point.....	chrysolite.....	
		garnet.....	
		staurolite.....	
		amphibole.....	gray green actinolite.....
		pyroxene.....	

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
293	x		orthoclase, epidote.....	43
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				43
294		in Georgia quartzite and slates.....		43
295		in gneiss.....		27, 111

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296	*†	Clinton formation.....		194
		"	hematite.....	43
297	*	"		194

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298	*†	in gneiss.....	chalcopyrite.....	5, 43, 101
		"	pyrrhotite.....	43, 101
		"	"	43
		"	amphibole, calcite.....	43
		"	pyroxene.....	43
		"	chalcopyrite.....	43, e
	x	"		43
299		in norite contact.....	amphibole.....	43, 228
		"	pyroxene.....	43
		"	sillimanite.....	43, 228
		"	"	228
		"	staurolite.....	43, 228
300	*	in norite.....	spinel garnet.....	43, 228
	*	"	"	43, 228
		"	magnetite.....	43
		"	"	228, w
301		in norite contact.....		44
		" mica schist.....	staurolite.....	44
		"	garnet.....	44
		in limestone.....	pyroxene.....	44, 228
		"	amphibole.....	228

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NO.	LOCALITY	SPECIES	DESCRIPTION
Cortlandt (continued)			
302	Peekskill.....	amphibole.....
		staurolite.....	small crystals.....
		graphite.....	.....
Eastchester			
303	Tuckahoe.....	dolomite.....	massive.....
		phlogopite.....	.....
		sphalerite.....	dark rounded masses.....
		pyrite.....	.....
		chalcopyrite.....	.....
Harrison			
304	1m. w. Port Chester.....	serpentine.....	pinkish brown masses.....
		brucite.....	.....
		chlorite.....	.....
		tourmalin.....	black.....
		amphibole.....	tremolite.....
Mt Pleasant			
305	Pleasantville.....	muscovite.....	large sheets, magnetite inclusions.
New Rochelle			
306	New Rochelle, Davenport's neck.....	serpentine.....	yellow, green and pinkish.....
		magnesite.....	snow white crusts.....
		brucite.....	small, imperfect crystals.....
		amphibole.....	actinolite, tremolite and hornblende
		enstatite.....	bronze.....
		chromite.....	disseminated crystals and grains. .
		quartz.....	drusy crystals and chalcedony.....
		garnet.....	small, imperfect crystals.....
		titanite.....	.....
		deweylite.....	.....
		calcite.....	crystalline massive.....
Ossining			
307	Ossining, Prison quarry.....	pyroxene.....	malacolite.....
		amphibole.....	tremolite.....
		pyrite.....	small bright crystals.....
		graphite.....	crystals.....

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
302	in norite.....	.....	43
	in mica schist.....	.....	43, 223
	".....	43
303 *	dolomitic limestone.....	pyrite, chalcopyrite.....	5, 43
	".....	m
	".....	pyrite, chalcopyrite.....	43
	".....	dolomite.....	43
	".....	".....	43
304	mica schist.....	brucite etc.....	5, 43
	in serpentine.....	serpentine.....	m
	".....	amphibole.....	5, 43
	in mica schist.....	.....	5, 43
	" serpentine.....	brucite etc.....	5, 43
305 x	e
306	neighboring rock mica schist.....	brucite, chromite.....	5, 43, 129
	on serpentine.....	serpentine, brucite.....	5, 43
	".....	" etc.....	5, 43
	serpentine.....	enstatite, garnet.....	5, 43, 129
	".....	amphibole.....	43, 129
	".....	serpentine.....	5, 43
	vein in serpentine.....	deweylite.....	5, 43, 129
	in mica schist and hornblende rock.....	titanite.....	5, 43
	".....	garnet.....	43
	vein in serpentine.....	chalcedony.....	129
	".....	".....	129
307 x	in dolomitic limestone.....	amphibole.....	5, 43
x	".....	pyroxene, pyrite.....	43
x	".....	amphibole.....	43
x	".....	calcite.....	e

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NO.	LOCALITY	SPECIES	DESCRIPTION
	Ossining (continued)		
	Ossining, Prison quarry (continued)...	quartz	chalcedony incrusting dolomite crystals.....
		"	crystals, occasionally doubly terminated.....
		dolomite.....	crystals
		talc	green foliated
		rutile.....	slender prismatic crystals.....
		serpentine	pseudomorph after pyroxene
		calcite.	scalenohedral crystals.....
308	Sparta, 1 m. s. Ossining (old copper mine)	cerussite.....	small prismatic crystals.....
		pyromorphite ..	mammillary incrustations on galena.....
		anglesite.....	.....
		vauquelinite...	green and brownish concretions... ..
		wulfenite.....	sparingly in tabular crystals
		vanadinite .....	.....
		galena.....	.....
		chalcopyrite ..	in minute crystals and massive ...
		azurite.....	.....
		malachite.....	.....
		pyrite.....	small crystals
		calcite.....	crystals of prismatic habit
309	Shafts 3 and 4 New Croton aqueduct 4 m. s.e. Croton Landing.....	stilbite.....	radiated aggregates.....
310	Shaft 5 New Croton aqueduct, Whitson	rutile.....	.....
		harmotome.....	twin crystals lining vugs.....
		heulandite.....	.....
		stilbite.....	small, sheaflike aggregates.....
		pectolite.....	.....
		beryl.....	.....
		pyrite.....	small bright crystals.....
		barite.....	white crystals and masses.....
		quartz.....	rough, imperfect crystals.....
		calcite.....	modified crystals, P't Henry type
		chrysolite.....	yellow grains.....
		tourmalin.....	minute, transparent, yellow prisms

COUNTY (continued)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
	x.....	in dolomitic limestone.....	dolomite.....	e
	xx.....	".....	".....	e
	".....	talc, mica.....	e
	".....	dolomite.....	e
	".....	" quartz.....	e
	xx.....	".....	pyrite.....	c
	x.....	".....	dolomite.....	e
308	".....	galena, chalcopyrite.....	5, 43
	in dolomitic limestone.....	galena, chalcopyrite.....	5, 43
	".....	43
	".....	pyromorphite.....	5, 43
	".....	vanadinite, pyromorphite.....	43
	".....	wulfenite.....	43
	".....	chalcopyrite, cerussite.....	43
	".....	galena.....	5, 43
	".....	malachite, galena.....	5, 43
	".....	azurite, galena.....	5, 43
	in gneiss.....	calcite.....	e
	on mica schist.....	.....	e
309	on gneiss.....	calcite, pyrite.....	e
310	in ".....	.....	43, e
	xx.....	".....	pyrite, barite.....	43, e
	x.....	".....	".....	43
	".....	43, e
	".....	43
	".....	5, 43
	".....	calcite.....	e
	".....	".....	e
	".....	".....	e
	".....	pyrite.....	e
	".....	prochlorite, tourmalin.....	e
	".....	chrysolite.....	e

WESTCHESTER

NO.	LOCALITY	SPECIES	DESCRIPTION
	Yonkers		
311	2½ m. n. Yonkers on aqueduct.....	pyrite.....	
		calcite.....	
		amphibole.....	tremolite in radiated aggregates...
		garnet.....	small, rounded crystals & masses..
		tourmalin.....	black crystals seldom perfect.....
		stilbite.....	
		muscovite.....	rhombic prisms.....
		apatite.....	transparent crystals.....
		epidote.....	massive and crystals.....
		analcite.....	small, perfect crystals.....
	Yorktown		
312	Croton Lake.....	sillimanite.....	fibrolite.....
		monazite.....	good crystals.....

WYOMING

Salt is obtained in commercial quan-

YATES

The rocks of this county afford no recorded minerals

COUNTY (*continued*)

NO.	QUALITY	GEOLOGIC ASSOCIATION	MINERALOGIC ASSOCIATION	AUTHORITY
311	x.....	in gneiss.....		43
		".....	amphibole.....	43
		".....	calcite, muscovite.....	5, 43
		".....	tourmalin.....	5, 43
		".....	apatite, garnet.....	5, 43
		".....	calcite.....	5
		".....	amphibole.....	5, 43
		".....	epidote.....	5, 43, 115
		".....	apatite.....	115
		".....	tourmalin etc.....	5, 43
312	.....	in mica schist.....	monazite, amphibole.....	43
		".....	sillimanite.....	43

COUNTY

tities from the rocks of this county.

COUNTY

localities of sufficient importance to note in this list.

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The numbers refer to the numbered localities given in columns 1 and 5 of the preceding list.

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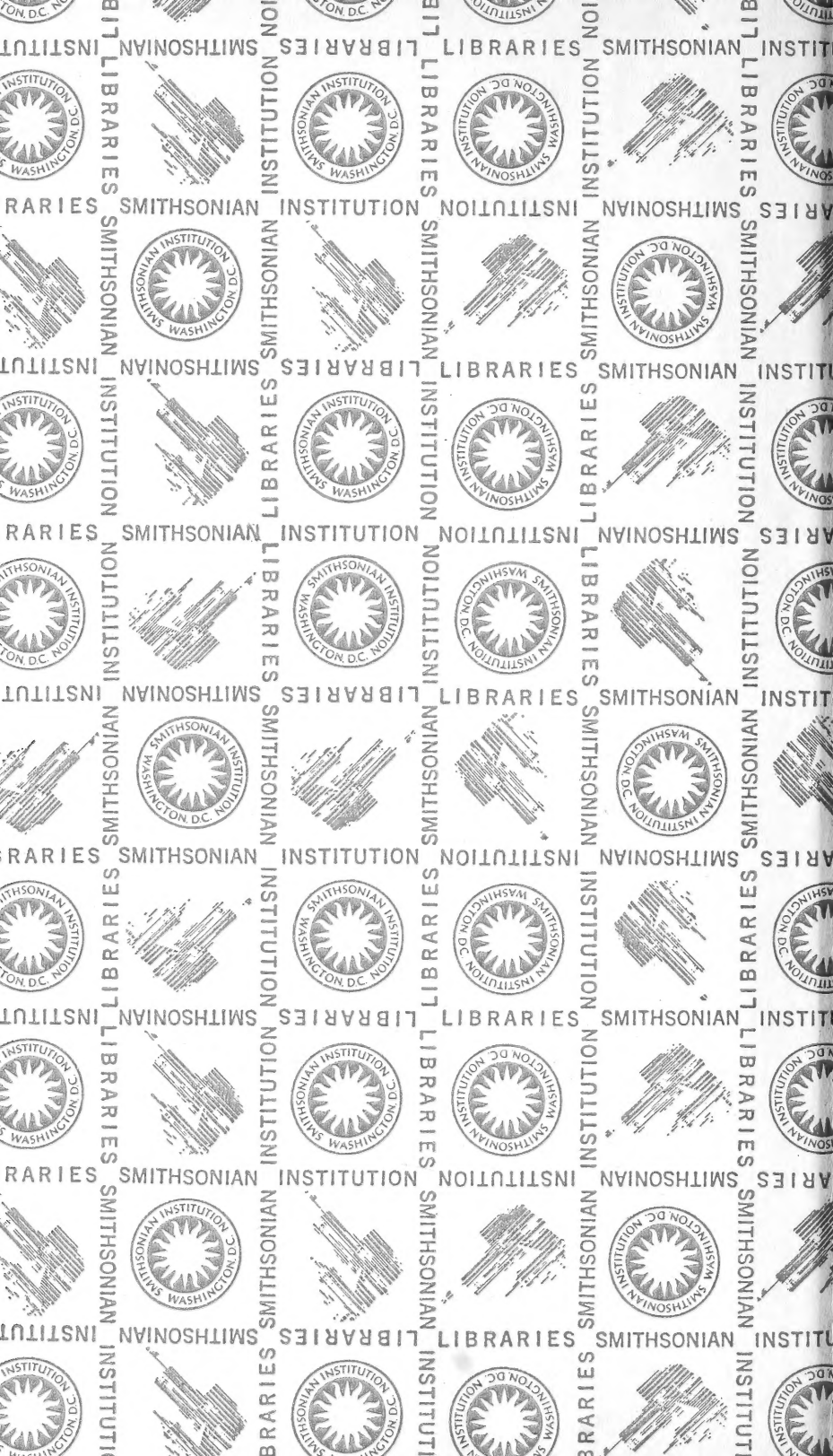
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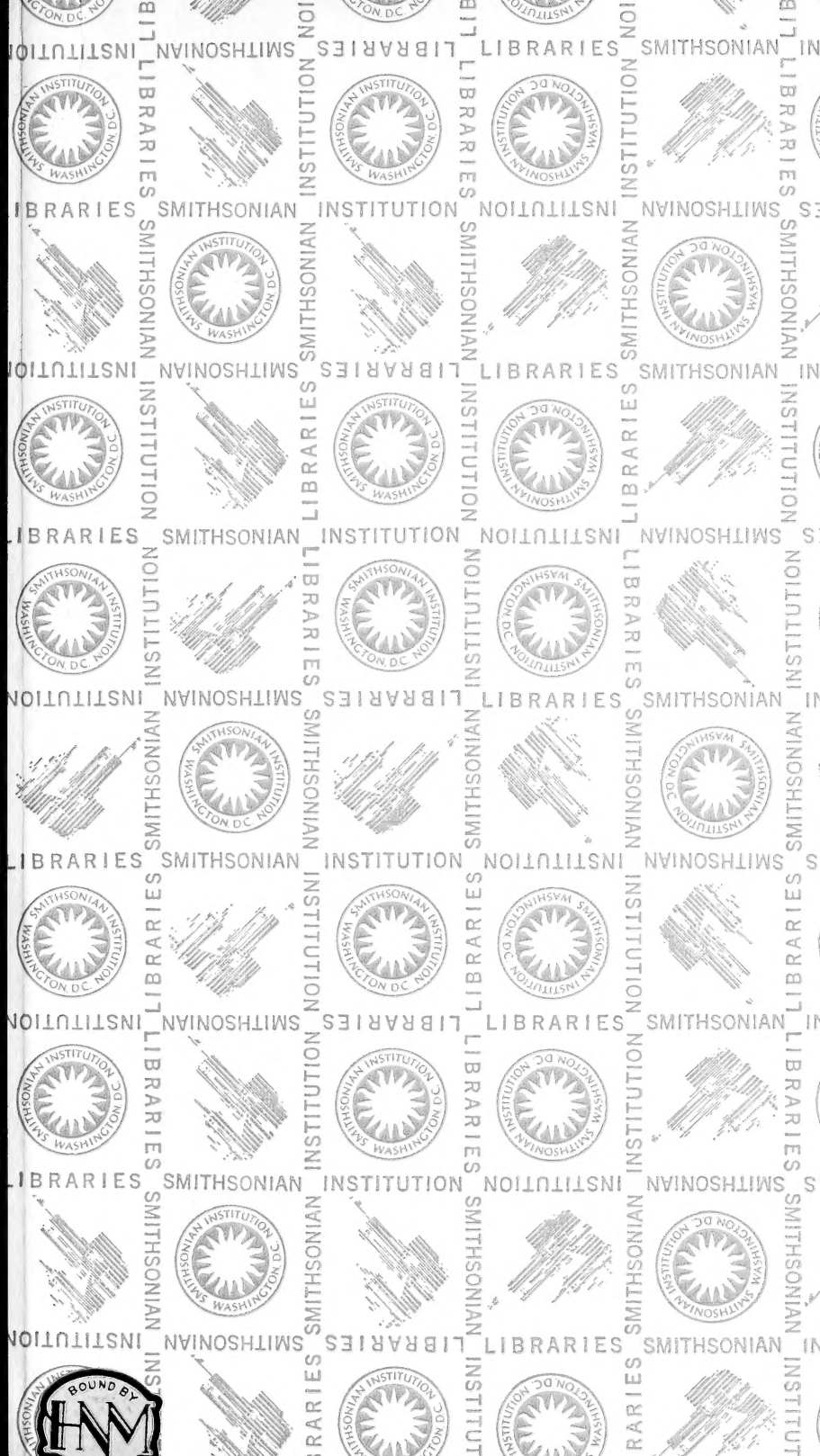
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